Introduction to

Grammatical Analysis

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SUMMER INSTITUTE OF LINGUISTICS

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P R E F A C E

This Handbook is one of a series published by the British School of the Summer Institute of Linguistics. These Handbooks are designed for use in conjunction with its courses and are intended primarily for the benefit of the students at S.I.L. They have, however, been made available more widely following requests for them.

Lesson materials and textbooks at our S.I.L. are usually the result of team-work. This Handbook is no exception. The materials in it have been in use for many years at our School. They were originally developed by John Bendor-Samuel in the 60's. Over the years several staff have contributed to them in a variety of ways, particularly Stephen Levinsohn, Constance Naish and Mona Perrin. More recently Elaine Thomas has re-written and expanded them with John Bendor-Samuel having more of an editorial and consultant role.

All our teaching materials are under constant review and adaptation. Any comments and suggestions therefore are warmly appreciated. They will be given serious attention and where appropriate incorporated into later editions of this Handbook.

In addition to its courses in Britain, the Summer Institute of Linguistics conducts both introductory and more advanced courses in Linguistics at centres in other parts of the world. Details of courses and of publications are available on request.

John T. Bendor-Samuel

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CHAPTER 1

INTRODUCTION

1.1 LANGUAGE COMPRISES UNITS AND PATTERNS

Language is patterned activity. When a person speaks he makes certain specific sounds, and he does this in specific sequences which form regular patterns. Specific sequences of sounds carry specific meanings. These stretches of sound are also arranged according to definite rules in specific patterns. The listener responds to the sounds he hears because he has mastered these rules and reacts automatically to them. He may not be able to describe the patterns his language uses, but he demonstrates his mastering of them by his ability on the one hand to hear the sounds and respond to them appropriately, and on the other hand to make the sounds and be understood by another person who has mastered that particular language.

Languages comprise various units which are arranged in a limited number of patterns. When we speak we use units of sounds, units of grammar, units of meaning at one and the same time. The linguist studies both the individual units and their arrangement. One language differs from another not only because it utilizes different units, but also because these units occur in different patterns.

LEX
GRAM

Language X may employ 20 consonants whereas Language Y may only use 15 consonants. In addition, Language Y may differ from Language X in that it has a consonant pattern which involves up to 3 consonants occurring together as a cluster whereas Language X only has clusters of 2 consonants. In the case of Language X the second consonant in such a cluster is limited to one particular consonant. This restriction does not occur in Language Y. So it immediately appears that these two languages differ not only because they employ a different number of consonants, but also the patterns in which these consonants occur are very different.

In grammar too, there are units and patterns. Grammar deals with stretches of speech which have meanings. These are the units in grammar corresponding to the sounds of phonology. Words, for instance, are one kind of grammatical unit. Sentences are another kind of grammatical unit. In learning a language it is not enough to learn all the units – for example, to learn every word in the dictionary. Indeed it is not even possible to learn all the units – for instance, to learn every possible sentence. The student must learn the patterns into which the words fit, otherwise he cannot talk. If he has mastered the grammatical patterns even if he has only learnt a small proportion of the grammatical units, e.g. words, he can still communicate effectively.

Just as there are different sounds from language to language, so there are different grammatical units, and equally as there are different

We are accustomed to the fact that simple grammatical units like words vary from language to language. When we encounter a language which we have not met before we expect the words to be totally different from the words of our own language. We do not always realise that the grammatical patterns will be equally different. Just a comparison of different ways in which languages form questions will illustrate something of how much variety is possible.

ENGLISH :   Is the man going home tonight ?

HIXRARYANA :
| bàn | | yaka | nteno |
| His (own) house | to | he-goes | (uncertainty) |

| tobo | kohsaya |
| man | night |

ENGENNI :
| edei | na | gbe | ɔmu | nanwumu | inia | a |
| man | the | go | home | in-evening | today | question-marker |

TLINGIT :
| yʎ | xʎna | nèl-de | kgwʌgút | əgé |
| this | evening | home-to | he-will-go | question-marker |

| wé | qá |
| that | man |

1.2   OBJECTIVES OF THE COURSE

In the light of these general considerations of the nature of language the following objectives have been set for this course :

1. We will study different grammatical patterns, in order to see how great a variety is found in natural languages. This will enlarge our linguistic horizons and prepare us to face the grammar of a strange language. It will also enable us to become consciously aware of the grammatical patterns of our own language. All this will help us so that we do not unconsciously expect to find the grammatical patterns of our own language when we study another language. In this way we will avoid imposing our patterns on the other language.

2. We will discuss methods of handling a great variety of grammatical patterns found in languages, so that we have a way of grasping the essential patterns of the language we shall be learning. There are many different ways of handling the grammar of languages, and various linguists have developed different systems of grammatical anlysis. These various "models" do, however, have many common elements. We shall try to keep as much as possible to this common ground on which all linguists build their analytical procedures. In doing this we shall be using a model called the Syntagmatic model (or the Structure-Function model). Other theories and models are studied in the Advanced Course. Our emphasis will be on simple procedures for handling grammatical data, rather than on grammatical theories as such. Any procedures are inevitably based on some grammatical theory, and we believe the procedures we shall teach you are theoretically valid, but we shall not attemp to discuss the theoretical groundwork in this course. Not because it is unimportant, but because it lies outside our immediate aims.

1.4   THE GRAMMATICAL HIERARCHY

In order to describe the complex grammatical patterns found in a language, it is necessary to divide the analysis into stages, so that, for example, in describing the sentence above, the complexities of the subject construction are not dealt with at the same time as the description of the basic sentence structure. So in every language a number of levels (or stages) in the description are set up. Each level is termed a rank. The number of ranks will vary from language to language, but the following are the most frequent :

discourse, paragraph, sentence, clause, phrase, word, morpheme*

The whole set of {ranks} {levels} constitutes the grammatical hierarchy.

At each rank there is one and only one grammatical unit. Thus at the sentence rank there is the sentence, at the clause rank the unit is the clause, at the phrase rank the unit is the phrase, etc. The name of the grammatical unit also serves as the name of the particular rank.

The following sentence is presented to illustrate the various ranks and units which are involved in its structure.

'Having come home, my brother repainted the two old tables' .

It can be divided into two clauses :

Having come home / my brother repainted the two old tables.

These clauses are termed elements of the sentence.

Now look at the second clause : 'my brother repainted the two old tables'. This can be divided into three phrases :

my brother / repainted / the two old tables

Notice that a phrase may be long : the two old tables, or short : repainted. Even if a phrase consists only of one word, it is still useful to consider the clause as made up of phrases.

Each phrase can be divided into words. So the structure of the whole sentence can be diagrammed as follows :

SENTENCE	Having come home my brother repainted the two old tables

CLAUSE		

PHRASE					

WORD									

ROOT										
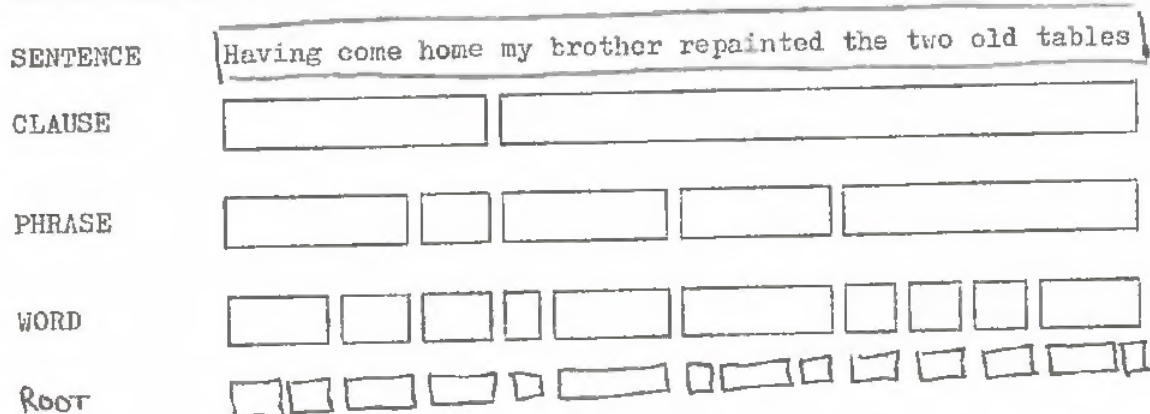
* Note : The term morpheme will be explained and illustrated in the following chapter.

CHAPTER 2

WORD ANALYSIS

2.1   THE MORPHEME

The lowest unit in the hierarchy is not the word, as a word can often be broken into meaningful parts. For example, two words in the sentence analysed in the previous chapter can be broken down still further :

repainted   re-paint-ed   tables   table-s

Each of these parts is termed a morpheme. Some morphemes have lexical meaning, e.g. -ed signifies past tense, -s signifies plural.

The morpheme is defined as "the smallest unit of grammar". Any unit which cannot be further subdivided is therefore a morpheme. Morphemes may contain a number of different sounds but they do not contain any further grammatical unit.

The size of a word, e.g. whether it has one or several syllabes, has nothing to do with its status as a morpheme. "Elephant" is a simple morpheme, so is "Caterpillar", while smaller words like "undo" are two morphemes. "Undo" can be broken down into two parts : 'un-' meaning 'negative' and the verb 'do'. "Elephant" and "Caterpillar" cannot be broken down into smaller parts.

Note that it is irrelevant that the last part of 'elephant' is '-ant' and of 'caterpillar' is '-pillar', since the morpheme 'ant' has nothing to do with the huge four-footed beast, nor does the 'pillar', which is part of a building have anything in common with the crawling creature. It is accidental that frequently some syllables in a morpheme may correspond to another morpheme. Where there is no grammatical or lexical meaning involved, this is treated purely as a phonological feature. The two words have some similarity in their sounds, but this does not mean they are the same morpheme.

A word may contain any number of morphemes from one upwards. The following sets of words illustrate some morphemes in English. (Note the problems sometimes caused by English spelling e.g. in beginn-ing).

end	agree	begin
end-s	agree-able	beginn-er
end-ing	agree-ment	beginn-ing
un-end-ing	dis-agree-ment	beginn-ings
un-end-ing-ly	dis-agree-ment-s	

2.2   IDENTIFICATION OF MORPHEMES

In every language it is necessary to identify the morphemes. When you already know a language it is not difficult to break down its words

These procedures can now be applied to the following data from Jebero
- Peru in order to identify the morphemes.

1.	nuŋʃa	'a little canoe'
2.	nuŋʃawək	'my little canoe'
3.	wilaʃa	'a little child'
4.	tulapəŋ	'your leg'
5.	piðəknəŋ	'his house'
6.	piðəklusaʔ	'houses'
7.	piðəkpəŋlusaʔ	'your houses'

The following is the list of morphemes.

-lusaʔ	'plural'
-nəŋ	'his'
nuŋ-	'canoe'
-pəŋ	'your'
piðək-	'house'
-ʃa	'little'
tula-	'leg'
-wək	'my'
wila-	'child'

2.3 PATTERN OF MORPHEMES

Besides identifying morphemes correctly it is important to note that
morphemes occur in specific sequences, not at random. In any word which
consists of more than one morpheme, the various morphemes occur in a
definite pattern. Indeed an awareness of the patterns in which groups
of morphemes occur frequently assists the identification of morphemes
and confirms our analysis of the morphemes in specific words.

Illustrative data based on Zaire Swahili :

1.	ninasem	'I speak'
2.	wunasem	'you speak'
3.	anasem	'he speaks'
4.	wanasem	'they speak'
5.	ninaon	'I see'
6.	nilion	'I saw'
7.	ninawaon	'I see them'
8.	niliwuon	'I saw you'
9.	ananion	'he sees me'
10.	wutakanion	'you will see me'

In order to discover the patter of the morphemes we begin by charting
the order of the morphemes in the longest word i.e. no. 10, writing each
morpheme in a separate column.

10. wu-   -taka-   -ni-   -on

Further illustrations of free and bound forms - from English:

Free + bound	cat + -s	turn + -ing	quick + -ly
Bound + free	un- + tie	re- + form	en- + courage
Free + free	black + bird	green + house	match + box

2.5 ROOT AND AFFIX

Words consisting of more than one morpheme have a nuclear part. The nucleus is called a root and is in contrast to the non-nuclear (=peripheral) morphemes which are called affixes. In a word like blacker, black is the nucleus or root, and -er is the peripheral element or affix.

Some words have two (very occasionally more than two) roots. A word like blackbird is made up of two words black and bird.

The root may be of any length, bound or free. An affix is a non-root, non-nuclear bound form.

The selection of what is nuclear and what is peripheral in a particular construction is not always obvious. The following criteria may be used to help determine the nuclear part :

a) Independence : nuclear parts tend to stand alone, whilst periph-eral parts may not. For example, affixes are bound forms, while roots tend to be free.

b) Class size : nuclei tend to belong to very large open classes (i.e. groupings consisting of a (theoretically) unlimited number of forms that may occur in a given place in a construction).
Peripheral parts belong to smaller closed classes (i.e. groupings consisting of a strictly limited number of forms that may occur in a given place). For example, examine the following sets of words :

     dogs, chairs, coats, hills, lakes

     goodness, gentleness, blackness, thickness

     walked, jumped, looked, studied

All the words consist of two morphemes. In each case the first morpheme belongs to a large open class, i.e. there is no end to the list of words which can be pluralised by adding -s, or of adjectives which can be made into nouns by the suffix -ness, or of verbs which can be put into the past tense by the suffix -ed. Whereas the second morphemes, namely -s, -ness and -ed each belong to small closed classes. There are not many other suffixes which can be added to nouns or verbs or adjectives in English.

2.6 TYPES OF AFFIX

Affixes are divided into four types :

a) Prefix : an affix that precedes the root, e.g. un-clear, in-complete, dis-appear.

iii) <u>Tone</u>

Highland Mazatec (Mexico) $a^3ma^3li^2$ Can you do it ?

$a^3ma^{3-2}li^2$ Can you really do it ?

The upglide to tone 2 is the morpheme meaning 'really'.

Bekwarra (Nigeria) (Mid tone unmarked: high tone ´: low tone `:)

abe éfàà	'they grind'	abe éhàrà	'they answer'
abe efàà	'they ground'	abe ehàrà	'they answered'
abe èfàà	'they should grind'	abe èhàrà	'they should answer'

High tone on the pronominal prefix marks present tense;
Mid tone on the pronominal prefix marks past tense;
Low tone on the pronominal prefix marks subjunctive.

Mundani (Cameroun)

afú^ʔ	'big valley'	áfú^ʔ	'small valley'
akɨb	'ladle, big spoon'	ákɨb	'spoon'
atɨ	'chair'	átɨ	'stool'

High tone on the initial vowel signifies the diminutive.

2.7 MORPHEMES WITH UNFAMILIAR MEANINGS

Languages may use affixes to mark categories which are quite un-
familiar to speakers of other languages. The distinction of meaning can
be shown, of course, in these other languages, but sometimes only by
rather complex descriptive phrases - not just by affixes.

Some examples :

<u>Hupa</u> - California (In Nida's <u>Morphology</u> - taken from R. Hall Jr
<u>Leave your Language Alone</u>)

xonta	'house now existing'
xontaneen	'house formerly existing (i.e. in ruins)'
xontate	'house that will exist (i.e. not yet built)'

<u>Aztec</u> - Mexico (In Nida's <u>Morphology</u>)

moma	'your hand'
moma.ci	'your honorable hand'
moma.wa	'your hands'
moma.ciciwa	'your honorable hands'

<u>Hixkaryana</u> - Brazil

komokye	'I came long ago'	(distant past)
komokno	'I came just now'	(immediate past)
komokraka	'I came '	(past/recent past)
momokno	'You came just now'	

<u>Tlingit</u> - Alaska (glottalization of consonants omitted)

1.	nagúttʃ	'he goes frequently'
2.	a xsatIntʃ	'he sees it often'
3.	askóowtʃ	'he always knows'
4.	yoo akayahék	'he's rubbing something'
5.	yoo s ya.átk	'they go back and forth'

In each case it is necessary to decide whether the affix is another member of an order already on the chart, in which case it can be written in the appropriate column, or whether it is a member of a new order, in which case an additional column must be added to the chart. This can be illustrated from the following data based on Turkish.

1.	kirdi	' it broke '
2.	kirildi	'it was broken'
3.	kirilmadi	'it was not broken'
4.	kirindi	'it broke itself'

From this amount of data it will be necessary to set up 3 columns after the root.

	root		negative	tense
3.	kir-	-il-	-ma-	-di
1.	kir-			-di
2.	kir-	-il-		-di
4.	kir-	-in-		-di

It will be seen that -in- 'reflexive' is a member of the same order of affixes as -il- 'passive' as they are mutually exclusive and occur in the same position following the root, and preceding the tense.

Additional data :

5.	kiriyordi	'it was breaking'
6.	kirmaiyorsin	'you are not breaking'
7.	kiriliyordim	'I was being broken'
8.	kirdisin	'you broke'
9.	kirinajaksin	'you will break yourself'
10.	kirajakdim	'I was going to break'

In no. 5 the affix -iyor- 'continuous' occurs. It is not similar to any affix which has so far occurred, and therefore a new column is required on the chart. Similarly with -sin '2nd pers. sg.' which follows the tense suffix, a new column is needed. In no. 7 -m '1st pers. sg.' denotes the catagory of person in the same way as -sin, and occurs in the same position, and is therefore a member of the same order. In no. 9 -ajak occurs preceding the person marker and would seem to be another member of the order marking tense. But in no. 10 it is seen that it co-occurs with the tense marker and therefore cannot be a member of the same order, but rather is a member of the same order as '-iyor- 'continuous'. (This shows that in Turkish the concept of future is more of an aspect, than a tense).

So the chart of the whole data will be as follows :

3.	kir-	-il-	-ma-		-di	
1.	kir-				-di	
2.	kir-	-il-			-di	
4.	kir-	-in-			-di	
5.	kir-			-iyor-	-di	
6.	kir-		-ma-	-iyor-		-sin
7.	kir-	-il-		-iyor-	-di	-m
8.	kir-				-di	-sin
9.	kir-	-in-		-ajak-		-sin
10.	kir-			-ajak-	-di	-m

CHAPTER 3

PHRASE ANALYSIS

3.1   THE STRUCTURE OF A UNIT : ELEMENTS

We have already seen from the grammatical hierarchy that each unit
is made up of elements which are units of the rank below. So the elements
of phrases are words, and these words are arranged in a certain pattern.
Just as charting the data can help one discover the pattern of morphemes
in the word, so charting can be used to discover the structure of elements
at other ranks.

· Illustrative data   Bekwarra – Nigeria

1.	(e) ba fia	'(they) will pay'
2.	(e) fia ma	'(they) have paid'
3.	(e) ba fia re	'(they) will not pay'
4.	(e) fia	'(they) paid'
5.	(e) ka fia	'then (they) paid'
6.	(e) ka ba fia	'then (they) will pay'
7.	(e) fia re	'(they) did not pay'
8.	(e) fia ma re	'(they) have not paid'
9.	(e) ba fia ma	'(they) are about to pay'
10.	(e) ka ba fia re	'then (they) will not pay'

In order to discover the structure of the verb phrase we chart the
data. (The (e) is the subject pronoun given as (they) in the English
translation, so that is not included in the chart). As was done when
charting the morphemes of a word, it is helpful to look at the longest
utterance before setting up the columns. Choosing no. 10 as a starting
point, the following columns with tentative labels are set up.

	Temp.	fut.	verb	neg.
10.	ka	ba	fia	re

So far there is only one order of words after the verb, namely re
'negative'. But when we look at no. 2 we find that ma 'perfective' also
occurs following the verb, but we cannot tell whether before or after the
negative. It is only when we come to no. 8 that we find the perfective
occurs before the negative.

A complete chart of the data would look like this.

	temp.	fut.	verb	perf.	neg.
10.	ka	ba	fia		re
1.		ba	fia		
2.			fia	ma	
3.		ba	fia		re
4.			fia		
5.	ka		fia		
6.	ka	ba	fia		
7.			fia		re
8.			fia	ma	re
9.		ba	fia	ma	

Notice that the left hand side shows what unit is being described and the righthand side shows what the elements are, their order and their status. Between the unit and the elements an arrow is used to show that what follows is a description of the structure of the unit. (If an obligatory element occurs immediately following the arrow, the plus sign is omitted).

Restrictions on the occurrence of elements : Just as in the description of the word restrictions on the occurrence of morphemes have to be stated, so similar statements are needed to describe the structure of the phrase (or any other unit). It is especially important to note the maximum number of attributive elements which actually occur, otherwise one may use phrases which are too long and clumsy when speaking or translating.

The maximum and minimum number of elements and any mutual restrictions between words can be discovered from the chart of the data. In the Bekwarra verb phrase we see the following:

maximum number of elements = head and 3 attributives
minimum number of elements = head only.

Notice that in a limited amount of data, there will often be restrictions on the occurrence of elements which are not true of the language as a whole. So statements on restrictions need revising as more data is acquired.

3.4 MORE COMPLEX PHRASE STRUCTURES

It frequently happens that some units at a rank may be more complex than other units. At phrase rank the nominal phrase is usually more complex than the verb phrase. Consider the following data from Tlingit – Alaska.

1. ax yées   shát   'my young wife'
    my young   wife

2. daxnax doo shát yéeyee   'his two former wives'
    two   his wife former

3. ldakát wé   yées káa   'all those young men'
    all   that young man

4. ldakát káa   'all men'
    all   man

5. wé jinkàadinax káa shàan   'those ten old men'
    that ten   man old

6. yá   shaawát shàan   'this old woman'
    this woman   old

7. ldakát jinkàadinax yées káa   'all ten young men'
    all   ten   young man

8. ldakát doo káawoo   'all his men'
    all   his man-possessed

9. yá ax káawoo   yéeyee   'my previous husband (colloquial)'
    this my man-poss former   (lit. this my former man)

10. wé   kustín káa   'that giant/gigantic man'
    that gigantic man

11. ldakát kustín káa   'all giants/gigantic men'
    all   gigantic man

12. wé   tléinax ax shát   'that one wife of mine'
    that one   my wife

Examples of different types of units at various ranks in English :

WORD	simple	(1 root)	cat, table
	compound	(2 roots)	blackbird, matchbox, armchair
	complex	(root and affix)	arrival, instruction, wickedness

PHRASE	NP types :	noun head	the pretty girl
		pronoun head	she
		demonstrative head	this

CLAUSE	transitive	John finished the meal.
	intransitive	Dave slept.
	ditransitive	He gave me the dish.

SENTENCE	coordinate	Mary studied hard and she attended every lecture.
	subordinate	If that was a fox, then I need new glasses.

3.6   TYPES OF NOMINAL PHRASE

In most languages the selection of the head word determines which and how many attributives can occur in the phrase. For example, English nominal phrases with a noun as head can be expanded in a variety of ways which are quite different from the way phrases with a numeral as head can be expanded. Consider the data from Engenni - Nigeria below :

1. edei yi
    man came   'A man came'

2. edei vie   yi
    man good   came   'A good man came'

3. olo   vie me yi
    friend   my   'My good friend came'

4. amɔ gbɛri yi .
    child small   'A small child came'

5. ikirikiri imo   yi
    all   children   'All the children came'

6. ikirikiri imachɛ   mɛ vie yi   'All my good relations came'
    all   relations

7. ikpoli edei bo   yi   'Many important people came'
    many   man great

8. ikirikiri yi   'Everybody came'
    all   came

9. omini ei vie yi   'His good child came'
    child his

10. ikpoli yi   'Many came'
    many   came

11. olo   ei wu   'His friend died'
    friend   died

In the English phrases <u>this book</u> and <u>these books</u> the forms of the noun and the demonstrative show that the two words are related. (Notice that you cannot say <u>this books</u> or <u>these book</u>). This is known as <u>agreement</u>, and is a widely used kind of syntagmatic feature. It is useful to distinguish two main kinds of agreement, concord and government, though in some cases there is a measure of overlap between them.

a) <u>Concord</u> : This occurs when two or more words each carry some marker, not necessarily of the same form, which signals the same grammatical category (e.g. number, person, class, gender i.e. masculine, feminine, etc.). In the phrase cited above, there is concord between the noun (book) and the demonstrative (this) with respect to number.

In Latin there is concord between a noun and adjective with respect to gender, number and case, as in :

filius bonus	'a good son'	filii boni	'good sons'
puella bona	'a good girl'	puellae bonae	'good girls'

The above forms are in the nominative (i.e. subject) case. Compare them with the following which are in the accusative (i.e. object) case :

filium bonum	'a good son'	filios bonos	'good sons'
puellam bonam	'a good girl'	puellas bonas	'good girls'

The data from Bassari – Ghana given below is an example of the concord system which is found in many African languages, particulary in Bantu languages and in some others belonging to the Niger–Congo family.

Illustrative data :   Bassari – Ghana

1.	uni	umbini	'this person'	biniib	bimbini	'these persons'
2.	uboti	umbini	'this chief'	bibotiib	bimbini	'these chiefs'
3.	diyin	dimbini	'this name'	ayin	ŋimbini	'these names'
4.	dibil	dimbini	'this seed'	abil	ŋimbini	'these seeds'
5.	kusaau	kumbini	'this farm'	tisaati	timbini	'these farms'
6.	kukabuu	kumbini	'this basket'	tikabuti	timbini	'these baskets'

The following statement can be made to describe the concord system.

There is concord within the nominal phrase with respect to class and number between the noun and the demonstrative, determined by the head of the NP and marked by affixes as follows :

			NOUN	DEMONSTRATIVE
Class	1	singular	u-	u-
		plural	bi- -ib	bi-
Class	2	singular	di-	di-
		plural	a-	ŋi-
Class	3	singular	ku- -u	ku-
		plural	ti- -ti	ti-

Note the important points about the statement.

The following statement can be made to describe the system of government. (Note how it includes the six points of information as in the statement of concord.)

There is government within the noun phrase with respect to class, the form of the article and the adjective being governed by the head of the nominal phrase as indicated in the following chart :

NOUN	ARTICLE	ADJECTIVE
Class 1	i-	no prefix
Class 2	a-	no prefix
Class 3	i-	ka-

Note that the information as to which class a noun belongs to would need to be given in the dictionary.

In learning another language, agreement of both kinds is very important and it is essential that these patterns are thoroughly mastered.

Agreement is not limited to phrases but is a feature which marks clauses also (see page 42).

3.8   OTHER MORPHEMES MARKING RELATIONSHIPS WITHIN THE PHRASE (cf.3.2.c)

In addition to morphemes marking agreement, there may be other morphemes marking relationships between the elements.

Consider the English phrase men, women and children . It consists of three nouns with a conjunction linking all three, i.e. marking that all three are related to each other, even though it actually occurs only once, between the last two nouns. If the nouns are expanded (by adding adjectives, etc.) the conjunction remains the same and has the same function. It clearly has a different status from the nouns and their attributive elements, since it serves to link them all together. For this reason we do not want to regard it as an element of the phrase, but rather as a syntagmatic feature marking co-ordination. The morpheme "or" in a phrase such as ' men, women or children' has a similar function.

CHAPTER 4

CLASSES OF UNITS

4.1 FUNCTION

We have already seen that the grammatical hierarchy is made up of a number of ranks. So far, in working out the structure of units we have been working down the hierarchy e.g. phrases are made up of words, words are made up of morphemes. But each unit also has a function as an element of the unit in the rank above. So, working up the hierarchy, morphemes function as elements of words, words function as elements of phrases etc. The highest unit in the hierarchy does not have any function in this sense.

We will use the following English sentence to illustrate how units function as elements of the unit above.

	NPs		VP		NPo		AP
That young child		/	plays	/	the piano	/	very well
Dem Adj Noun			Verb		Art Noun		Intens Adv

The first NP functions as the subject and first nuclear element of the clause (i.e. next rank above). The second NP functions as object and third nuclear element of the clause. The noun 'child' functions as the head of the NP (i.e. next rank above). The adjective 'young' functions as an attributive of the NP. Notice that in describing the function of a unit, we state both in what unit it occurs (i.e. its distribution) and also what its relationship is to other elements in the unit. At clause rank, obligatory elements are referred to as nuclear, and optional elements as peripheral. Thus the adverbial phrase functions as the final peripheral element of the clause.

We will now expand the original sentence.

That young child plays the piano very well, but he prefers the guitar.

The original clause now functions as the first element of the compound sentence (i.e. next rank above).

To recap: a unit functions as an element of a unit in the rank above in the hierarchy, and is made up of elements in the rank below.

4.2 GROUPING INTO CLASSES

Units at a given rank do not all function in the same way, e.g. in English, nouns and verbs do not function in the same sort of phrase, i.e. their distribution is different. Verbs do not function as elements of the NP but as elements of the VP. Nouns do not function as elements of the VP, but as elements of the NP.

2. kukrẽ kra   'The child eats'
    eats   child

3. ape   kra   'The child works'
    works child

4. kukrẽ kokoi ratʃ   'The big monkey eats'
    eats   monkey big

5. ape   kra   mɛtʃ   'The good child works'
    works child good

6. ape   mɛtʃ   kra   'The child works well'
    works well   child

7. ape   ratʃ   mɨ   mɛtʃ   'The good man works a lot'
    works a lot man   good

8. kukrẽ ratʃ   kokoi   punui   'The bad monkey eats a lot'
    eats   a lot monkey bad

9. ape   punui mɨ   piɲetʃ   'The old man works badly'
    works badly man   old

10. ape   piɲetʃ   mɨ   · 'The man works a long time'
    works a long time   man

Analysing the clause into two phrases NP and VP, the data is charted
as shown below.

Note·It is a more concise, and therefore preferable, analysis to consider
the adverb as an element of the VP, rather than to set up an AP, since the
adverb is never expanded. It is not usually advisable to set up a unit at
a rank if it would always be identical with the unit at the rank below.

VP		NP	
Head	Attributive	Head	Attributive
kukrẽ ape	mɛtʃ ratʃ punui piɲetʃ	kra kokoi mɨ	ratʃ mɛtʃ punui piɲetʃ

On examining the lists, we see that the words that function as head
of the NP and of the VP are different, and these words do not function
anywhere else. These groups of words therefore form two distinct classes
because they function as the head element of two different units at the
rank above.

But the list of words that function as attributive in the two phrases
are identical. Therefore these words form one class, not two, since they
can all function as attributives of the same units at the rank above.

Class B affixes occur following both noun and verb roots. These can be called person markers.

-be	'3rd pers. sg.'
-du	'1st pers. pl.'

Notice that this class functions in more than one unit at the rank above, i.e. as an element of both noun and verb. This is comparable with the Qualifiers in the Apinayé data.

Class C affixes occur preceding noun roots only. There is only one member.

ʃ- 'possessive marker'

4.6 SUBCLASSES OF THE WORD

As has already been seen, units sometimes function as elements in the rank above in more than one way. In such instances there may be a complete overlap so that all the forms which function as a particular element also function as a second element in the structure. In such cases all these forms are regarded as a single class. On the other hand it may well be that while all members of a class function as one element in the structure, only certain members of the class function as the second element in the structure.

Compare English 'house' and 'home' :

'He has a nice house/home'
'He went home'

House and home are members of the class of items which function as head of a Nominal Phrase which we call nouns. Home also functions as head of a Locative Phrase (LP) as in the second sentence. House cannot function in the same way in such a phrase. Within the whole class of nouns therefore we need to distinguish the fact that some members of this class also function-in a LP. To distinguish nouns which function in both kinds of phrase from the nouns which cannot function in the LP, two subclasses would be set up, the former being assigned to one subclass and the latter to the other. In some cases, three or even more subclasses may be required.

The following data from Guarani - Bolivia illustrates subclasses of the Qualifier.

A - Qualifier Phrase - Nominal Phrase

1. hasɨ tovajara ʔi   'Little brother-in-law
   sick brother-in-law little   is sick'

2. hasɨ eterei   'He is very sick'
   sick very

3. poʃɨ tupã   'The gods are angry'
   angry gods

17.	ogwereko vai kuñataĩ ?i		'The little girl treated
	treat badly girl little		(him) badly'
18.	ogwereko poʃɨ kunumi		'The boy treated (him) with
	treat with-anger boy		anger'
19.	ogwereko vai eterei		'He treated (him) very badly'
	treat badly very		

Here is the chart for Part B of the data. (A long utterance has been charted first to facilitate setting up the columns).

		VP			NP	
		Verb	Qual	Intens	Noun	Adj
10.		oiko	puku		tupã	gwasu
8.		oiko	porã			
9.		oiko	hasɨ			
11.		oiko	porã		tovajara	
12.		okɨ			kañigwera	
13.		okɨ	rusu			
14.		ogwereko	vai			
15.		ogwereko	poʃɨ			
16.		oiko	hasɨ		heindɨrɨ	
17.		ogwereko	vai		kuñataĩ	?i
18.		ogwereko	poʃɨ		kunumi	
19.		ogwereko	vai	eterei		

Comparing this chart for Part B with the one for Part A, we notice :

1. There is one new word class – the verb class.
2. The noun and adj. classes have additional members
   Noun class – heindɨrɨ 'sister'
              kañigwera 'hidden-ones'
              kunumi 'boy'

   Adj class – gwasu 'great'
3. There are additional members of the qualifier class
              porã 'well'
              rusu 'heavily'
              vai 'badly'

These words function only in the VP while the rest of the class functions in both the Qual P and the VP. So it is necessary to subdivide the class. Subclass A functions in both phrases, subclass B functions only in the VP. Below is an example of how to describe subclasses of words. Note that when subclasses are set up, every member of the complete class must be assigned to one subclass or another.

The Qualifier Class functions as head of the Qual P and as first attributive element in the VP. Subclasses are set up as follows :

Subclass A functions both as head of the Qual P and as first attributive element in the VP.

4.7   PARTICLES

In classifying words on the basis of their function, a division
needs to be made in some languages between <u>major words</u> and <u>particles</u>.
Although particles may be phonological words, they often do not fit into
the grammatical hierarchy as elements of phrases.

Characteristics of the particle are :

1. It is an uninflected root (i.e. it cannot take any affixes).
2. It has limited distribution. Often it functions only as a
   syntagmatic feature, rarely as an element of the phrase. (e.g.
   Engenni <u>a</u>'question marker'
3. It is a member of a closed class : (e.g. Engenni question
   particles : <u>a</u> 'general question' , <u>sam</u> 'alternative', <u>ɛ</u> 'doubting
   question').
4. It may have special phonological characteristics (e.g. stress,
   tone, limited syllable pattern- e.g. in Bekwarra <u>r</u> and <u>ŋ</u> do not
   occur initially in major word classes, but may do in a particle).

In the data from Tataltepec Chatino - Mexico given below, notice
how that the particles which are circled do not function as either
head or an attributive in any phrase. In addition, they cannot be
inflected, nor can they take sentence or clause stress, and thus are
distinguished from major words.

Illustrative data : Tataltepec Chatino - Mexico

1. (loʔo) tjala   Hlore   (tʃaʔ)   kjeʔ   nã   kaku   nguʔ
   and will-arrive Florence in-order-that will-cook thing will-eat they

   (tʃaʔ)   kaka   tsoʔo tjikjee   nguʔ
   in-order-that will-be good stomach-of they

   'And then Florence will arrive to cook something for them to eat
   so that they will be content'

2. tsa   Ndajũ   (su)   ndiʔĩ kiñaʔã ñatĭ
   will-go Anthony where living lots person

   'Anthony will be going to a populated place (where lots of
   people live)'.

3. tsa   nguʔ (loʔo) tjanũ   nguʔ biʔ   (liʔ)
   will-go they and will-remain they those-particular then

   'They will go and will stay there then '.

4. (si) kulijaʔ nguʔ tsoʔo ñaʔã   steʔ   nguʔ (liʔ)
   if is-rich they good looking clothes-of they then

   'If people are rich then their clothes look nice.'

CHAPTER 5

CLAUSE ANALYSIS

5.1 CLAUSE STRUCTURE

The same principles of analysis apply at clause rank as at phrase
rank. So the structure of the clause is described in terms of elements,
which are phrases, and syntagmatic features. The data below from Bisa -
Ghana will be used to illustrate the analysis of the clause.

1. luban gusile bi   nyi   bi busu zaa la   'The old woman carried
   woman old   the child the carry road along the child along the road'

2. nyi   bi   gi   bi   ze   'The child hit the dog'
   child the dog   the hit

3. gwaa   gusile bi gi bi ze zaa u   'The old man hit the dog
   man   old   the dog the hit road on   on the road'

4. nyi   bi luban   gusile bi gaa daasi u   'The child led the old
   child the woman   old   the led market to woman to market'

5. gi bi nyi   bi gaa par u   'The dog led the child
   dog the child the led house to   to a house'

6. gwaa luban gusile ze   'A man hit an old woman'
   man   woman old   hit

7. gwaa bi gi bi busu par u   'The man carried the
   man   the dog the carry house to   dog to a house'

8. nyi gwaa bi ze daasi u   'A child hit the man
   child man the hit market to   at market'

Just as charting helps the analyst to discover the structure of phrases,
so charting is used in the analysis of the clause. In setting up the chart,
choose the longest utterance as the starting point. Look for words func-
tioning as heads of phrases, make tentative phrase breaks and lable the
phrases. (Later in this chapter the criteria for determining the boundaries
of phrases will be discussed).
Columns are set up for each phrase and the whole data is charted thus.

	NP (subject)	NP (object)	VP	LP
1.	luban gusile bi	nyi bi	busu	zaa la
2.	nyi bi	gi bi	ze	
3.	gwaa gusile bi	gi bi	ze	zaa u
4.	nyi bi	luban gusile bi	gaa	daasi u
5.	gi bi	nyi bi	gaa	par u
6.	gwaa	luban gusile	ze	
7.	gwaa bi	gi bi	busu	par u
8.	nyi	gwaa bi	ze	daasi u

2. <u>Replacability</u> : If a single word may be replaced by a group of words without any other changes taking place in the structure of the clause, e.g.'the man worked <u>there</u>'and'the man worked <u>in the factory</u>,' then the word may be better regarded as the head of a separate phrase.

3. <u>Contiguity</u> : Usually the elements of a phrase are contiguous but they are not always so, e.g. <u>Didn't</u> that man <u>go</u> ?

4. <u>Mobility</u> : If a word or a group of words may occur at more than one place in the clause, e.g.'he stood <u>there</u>'and <u>there</u> he stood, not saying a word', it may be better considered a separate phrase.

5. <u>Occurrence of syntactic markers</u> : Syntactic markers are often useful in indicating the beginning or end of a phrase. For example, in Paumari the object marker -<u>ra</u> occurs at the end of the NPo.

6. <u>Concord</u> : Concord may show the extent of a phrase.

The application of these criteria can be illustrated from the following data from Chatino — Mexico.

Note : 'Se' is a name.

1. tjukwa   ʃi   'Sit here for a while'
   sit here

2. ndjukwa se tsãã   'Se sat here earlier'
   sat here

3. ʃaaʔ ndjukwa se ʃi   'Se sat here for a while again'
        sat here

4. ndjukwa se tsãã ti   'Se sat here just a moment ago'
   sat here

5. la ka ndjukwa   'He sat here yesterday'
        sat here

6. la tii ndja se   'Se went the day before
        went   yesterday'

7. la ka ti ndja se   'Se went just yesterday'
        went

8. lje ndjukwa se   'Se sat down very hard'
        sat

9. la ka lje ndja se   'Se went ever so far yesterday'
        went

10. la tii ti lje ndja se   'Se went ever so far just the
        went   day before yesterday'

11. la tii ndjukwa ʃi ti   'He sat here the day before
        sat here   yesterday just for a little
                             while'

9. a:kalista:n nawan   pedro lakapał
    after-that will-speak Peter quickly

10. ču?nca pedro wał
    thus   Peter spoke

11. nawan   laqa:ču   ka:cisa:t
    he-will-speak everywhere early

12. wał   a?ča maqłuwa
    he-spoke here many-times

Here is a chart of the data.

	Intro Word	Time$_1$	NPs	Time$_2$	Verb	NPs	locative	Adv	Time$_3$
1.					wat				
2.	ču?nca				nawan				
3.					wat			maqtuwa	
4.	čo?la				wat			lakapat	
5.	ču?nca		wan qa?wa:?ču	laqali	nawan				
6.					nawan			maqtuwa	laqali tušuma?n
7.			pedro		wat		laqa:ču		
8.		qo:tan	pedro		ki:wat			wampala	
9.				akalista:n	nawan	pedro		lakapat	
10.	ču?nca		pedro		wat				
11.					nawan		laqa:ču		ka:cisa:t
12.					wat		a?ca	maqtuwa	

The following conclusions regarding the analysis can be drawn from the chart :

a) the adverbs, locatives and time$_2$ words should be analysed as separate phrases as they are not always contiguous to the VP.

b) the time$_2$ words should be analysed as separate time phrases as they are mobile and can be expanded (nos. 5 and 6).

Note : the introductory word is not analysed as part of the structure of the clause as it is a syntagmatic feature of the sentence (see chapter 6 p. 61).

The formula for the structure of the clause in this Totonac data is

$$Cl \longrightarrow (TP_1) \quad (NP_s) \quad + \ VP \quad (LP) \quad (AdvP) \quad (TP_2)$$

Note the broken arrows which indicate an alternative position of the phrase.

5.3   AGREEMENT AT CLAUSE RANK

Just as the relationship between the elements of the phrase may be marked by agreement, so agreement of both kinds may mark the relationship between phrases in the clause.

A. Concord : the following data from Tsonga - Republic of South Africa and Mozambique illustrates the operation of concord between the NPs and VP. (There is also concord between the noun and adjective in the NP which would be described at phrase rank).

The following data from Paumari - Brazil is a further example of government between the elements of the clause.

Note the following. Nego and Gisi are personal names, hado is feminine, sipatihi is masculine, -a is subject marker, -ra is an object marker. These are clause rank features.

1.	Nego-a binofimania hado	5. sipatihi-ra nofimania Gisi
	(man) wants knife	banana wants (girl)
2.	Nego-a binofimanira sipatihi	6. sipatihi-ra nofimanira Nego
	(man) wants banana	banana wants (man)
3.	Nego hado-ra nofimanira	7. hado Nego-a binofimania
	(man) knife wants	knife (man) wants
4.	Gisi hado-ra nofimania	8. sipatihi Gisi-a binofimanira
	(girl)knife wants	banana (girl) wants

The description of the govern ment operating within the clause is as follows :

a) The NP immediately preceding the VP is marked as subject or object.

b) The form of the verb is governed by the noun functioning as head of the NP as follows :

i. When the NP functioning as object is unmarked (or in other words when NPs immediately precedes the VP), the verb carries the prefix bi-.

ii. The suffix of the verb is governed by the gender of the noun in the unmarked NP as follows :

unmarked NP head	Verb suffix
masculine	-ra
feminine	-a

C. Cross reference : Quite frequently, languages may have agreement with respect to person between nouns or pronouns and other forms which signal person elsewere in the clause (most frequently pronominal affixes in the verb word). Such agreement is referred to as cross-reference.

In the following data from Tlingit - Alaska the subject person is marked by a noun or free pronoun and also by a prefix to the verb. (Free pronoun and verb prefix are circled).

1. ldakát ooháan áwe haa káak wutoositèen 'All of us saw our uncle'
   all   we   our uncle we-saw

2. ch'a xát áwe doo tsálgee w xasitèen   'I alone saw his squirrel'
   just I   his squirrel I-saw

3. haa yátx'ee áwe yee kèidlee has awoositèen 'Our children saw your dog'
   our children   your dog   pl. he-saw

4. yeehwáan áwe haa kèidlee wodyeehàak   'You killed our dog'
   you   our dog   you-killed

The following data from Hixkaryana - Brazil will serve to illustrate the establishment of clause types in a language.

1. Onɨ wyaro nehʃakonɨ amñehra   'It was like this a long time ago'
   this like it-was   long-time-ago

2. Ethɨra   nehʃatʃkonɨ toto   komo amñehra 'The people were
   without-food they-were person group long-time without food a long
                                                   -ago   time ago'

3. Namr̃ekyatʃkonɨ   ukukuru komo 'Some of them went hunting'
   they-went-hunting some   group

4. Totʃownɨ tʃetʃa waka   'They went into the forest'
   they-went forest into

5. Woto   yohor̃atʃkonɨ   'They were looking for game animals'
   game-animals they-were-looking-for

6. Hoñko   woto   'The game (is/was) wild pig'
   wild-pig game

7. Koso ʃarha tohosomɨ   'What (they were) looking for
   deer also thing-being-looked-for (was) deer also'

8. Kamara yoñtʃownɨ haʃaha   'Finally they saw a jaguar'
   jaguar they-saw-it finally

9. Bayañe nehʃakonɨ kamara   'The jaguar was fierce'
   fierce it-was   jaguar

10. Bayañemɨ   rmahaʃa mokro   'That one (is/was) very fierce'
    fierce-one very   that-one

11. Noser̃ehyatʃkonɨ toto   komo kamara hona 'The men were afraid of
    they-were-afraid person group jaguar to   the jaguar'

12. Nekahtɨmtʃownɨ ukukuru komo 'Some of them ran away'
    they-ran-away   some   group

13. Towankar̃hemɨ   anaro komo   'Others (were) courageous'
    courageous-one other group

14. Kamara yotahatʃownɨ   haʃaha moʃamo 'These killed the jaguar finally'
    jaguar they-killed-him finally these-ones

15. Totʃownɨ   harha owto   hona   'They went back to the village'
    they-went back village to

The clauses are divided into phrases labelled, and then charted.
A new chart is started whenever there is a different structure which may be a new clause type.

	Complement P	Verbal P	Nominal Ps	Temporal P
1.	onɨ wyaro	nehʃakonɨ		amñehra
2.	Ethɨra	nehʃatʃkonɨ	toto komo	amñehra
9.	Bayañe	nehʃakonɨ	kamara	

Clause types 2 and 3
    Intransitive   .   Transitive

        obligatory absence of NP_o .   obligatory NP_o

        different classes of verbs as head of VP (intransitive versus transitive)

Clause types 1 and 2, 3
    Stative   Intrans., Transitive

        obligatory Comp P   no Comp P
        different classes of verbs as head of VP (copula (stative) versus action verb)

5.5   POSSIBLE CLAUSE TYPES

Just as we have seen that there are various types of phrases which we can expect in a language (e.g. many languages have NP with pronoun as head, NP with demonstrative as head, NP with Noun as head, etc.), so there are many types of clauses which are commonly found. It must be stressed, however, that each language must be analysed individually, and the structures that are found must be grouped into the appropriate types by applying the formal criteria as demonstrated above.

Below there are some examples of clause types which frequently occur in languages. The English examples given are all verbal clauses, but in other languages some of the types may be non-verbal constructions e.g.

    Equative   The book (is) a dictionary.   NP + NP
    Descriptive   The book (is) beautiful.   NP + AdjP
    Locative   The man (is) at home.   NP + LP

Common clause types :

Di-transitive – 2 NPo, often NPo and NPio : John gave Mary a present.
Complex transitive – 2 NPo, usually NPo and NPcomp : She thought him
                     a dear.
Transitive – one NPo : She kissed him.
Semi-transitive – verb of motion and Locative in place of NPo : He
                  went home.
Intransitive – no NPo : He slept peacefully.
Stative – often description of state : John was happy.
Impersonal – no NPs or NPo : It was springtime.
Active – optional NPo ; used where there is no distinction between
         transitive and intransitive.
Attributive/Descriptive – may be verbal or non-verbal, with AdjP as
                    nucleus.
Equative – usually 2 NP, a topic and a comment : John was Mary's
         sweetheart.
Locative – may be verbal or non-verbal clause ; if the latter, then
         LP as nucleus.
Nominal – NP as nucleus.
Eventive : The weather turned cold.

(Modification : when the Locative clause is negated, the locative
marker -u is obligatorily absent).

In the following examples, | is again used to mark the boundary
between phrases :

Nominal : íxt'   awe   a<u>x</u> kélk'w awé | wé íxt'
           'he is a medicine man'   'that medicine man is my nephew'

           aak'é at<u>x</u>á ayá   aak'é at<u>x</u>á ayá | yá laa<u>k</u>'ask
           'this is good food'   'this black-seaweed is good food'

Locative : aatlèin dáanaa | doo jèewu   tleíl | dáanaa | doo jèe
           lots   money | his hand-LM   neg | money | his hand-#
           'he has lots of money'   'he hasn't any money'

           ee   <u>x</u>ðonee | nèilu   tléil | nèil | ee   <u>x</u>ðonee
           your friend | inside-LM   neg | inside-# your friend
           'your friend is at home'   'your friend isn't at home/indoors'

Nyabwa (Ivory Coast)

Besides such types as transitive, intransitive, etc., the following
types have been set up :

Reflexive : o^3 dyi^{1}dyri^4-o^2 'they defended themselves'

             (+NPs + VPreflex - NPo ; periphery very limited ;
             reduplication of basic verb stem)

Auxiliary : ε^3 se^3 ɓɛɛ^{24} ...   'it isn't possible (that..)'

             (+NPs + VPaux + NPo ; NPo is either a third person
             impersonal pronoun or a clause with projective aspect)

Situational : a^{4}nɩ^4-e^2-e^4 bli^{4}bli^{4}bli^4 'we are jet black'

             (+NPs +.VPsit + QualP ; the Qualitative Phrase can be
             one of a number of adverbial type phrases, but is
             obligatory)

Complement : i^{2}nɔ^{24} du^1-o^2-o^4 di^{4}da^{3}yi^1 'he's the one who is Didayi'

             (+NPs + VPcomp + NPcomp; the NPcomp is found only in
             this clause type).

Kolami (India)

Intransitive	amd mangten he slept	'He slept'
Semi-transitive	add ellang seddin she house went	'She went to the house'
Transitive	amd aambal tinden he rice ate	'He ate rice'
Di-transitive	amd anung pustok siyten he me book gave	'He gave me a book'
Stative	ramak poDam anDan Ram tall is	'Ram is tall'

7. Ade dɔ   eseni   'Ade stole fish'
   Ade stole fish

8. eseni kuya   'Fish is scarce'
   fish is-scarce (verb)

9. edei nɛ fina n'ɔkɔ   'The man entered the canoe'
   man the enter in-canoe

10. Ade edei vie   'Ade is a kind man'
    Ade man kind

11. adidɛ̂   nɛ wu   'The rich man died'
    rich-man the died

12. edei dori nɛ Ade   'The tall man is Ade'
    man   tall the Ade

13. Ade dɔ   'Ade stole (it)'
    Ade stole

14. edei nɛ wu uwu ɔdwei   'The man died a terrible
    man the died death fearful   death'

After charting, it appears there are 4 different structures :

1.	Equative	eq Cl——⟶NPt + NPc	nos. 1, 10, 12
2.	Intransitive	intr Cl——⟶NPs + VP(LP)	nos. 2, 9, 11, 13
3.	Transitive	tr Cl——⟶NPs + VP + NPo(LP)	nos. 3, 5, 7, 14
4.	Descriptive	desc Cl——⟶NPs + VP desc	nos. 4, 6, 8

But on examining the structures, there is not enough distinction between nos. 2 and 3 to make them different types, so they can be united into one type : active.

Three types of clause can therefore be set up :

Type 1 Equative   eq Cl⟶NP_t + NP_c

Type 2 Active   act Cl⟶NP_s + VP (NP_o) (LP)

Type 3 Descriptive desc Cl⟶NP_s + VP_{desc}

Note that VP_{desc} has to be labelled differently from the other VP because a different class of verbs functions as its head. These are verbs which all end in -ya.

5.8 DEMARCATIVE SYNTAGMATIC FEATURES

In analysing the structure of a grammatical unit there are often some parts which cannot conveniently be handled as elements of the unit, since they are not themselves units in the next lowest rank in the hierarchy. An example of this is the question marker in a question sentence, as in Engenni :

edei nɛ do   eseni   edei nɛ do   eseni a
man the stole fish   man the   stole fish ques
'The man stole the fish'   'Did the man steal the fish ?'

5.9   CLITICS

In the previous section, it was stated that particles and clitics often function as demarcative syntagmatic features marking a unit as different from other units as the same rank. Mention has already been made of particles (page 35). A clitic is a morpheme which grammatically is relevant to a unit as a whole, but phonologically is bound to some part of it. For example, consider the two phrases the King of England's crown and the man in the grey suit's hat . The morpheme -s indicating possession is relevant to the whole of the preceding phrase, yet is clearly bound phonologically to the preceding word, as it changes from voiced to voiceless depending on the final phoneme in the preceding word.

Clitics are not written as separate words. They are either joined to the adjacent word, or linked to it by a hyphen, or an apostrophe (as in the English possessive).

In the following data from Tlingit – Alaska, nos. 1-6 illustrate the clitics -t 'to, as far as' , -dei 'to, towards,' and -gaa 'for, to obtain'. Notice how they are phonologically bound to the preceding word, as they are either a non-syllabic consonant (i.e. t) or their tone is determined by the preceding tone (L following H, H following M). But they are grammatically relevant to the whole phrase and not just to the word they are bound to.

1. ax hídee-t   oowagút   'He went to (and arrived at)
   my house-poss-to he went   my house'

2. ax hídee   tlén-t cowagút   'He went to my big house'
   my house-poss big-to he-went

3. ax hídee-déi   woogòot   'He went to (towards) my
   my house-poss-to he-went   house'

4. ax hídee   tlén-dèi woogòot   'He went to my big house'
   my house-poss big-to   he-went

5. doo àat-gáa woogòot   'He went for (to fetch) his
   his aunt-for he-went   aunt'

6. doo àat hás-gàa woogòot   'He went to fetch his aunts'
   his aunt pl.-for he-went

In nos. 7-10 from the same language, notice that the tone of the morphemes nák 'without' and tèen 'with' remains constant. This shows that they are not phonologically bound to the preceding word. They are therefore particles, and not clitics.

7. ax àat nák   ax híde-déi woogòot 'He went to my house without
   my aunt without my house-to he-went   my aunt'

8. doo àat hás nák   woogòot   'He went without his aunts'
   his aunt pl. without he-went

9. tléil doo àat   tèen woogòot   'He didn't go with his aunt'
      neg. his aunt with he-went

10. doo àat   hás tèen woo.àat   'He went with his aunts'
    his aunt pl. with   they-went

1. Cayna   runa iscay huagra chipi huañuchi-mi   'Yesterday the
    yesterday man two   cow   there killed-witnessed   man killed two
                                                            cows there'

2. Cayna   huagra chipi huañuchi-si   'Yesterday he
    yesterday cow   there killed-not-witnessed   killed a cow there'

3. Chipi runa-mi   huañuchi   'The man killed
    there man-witnessed killed   it there'

4. Huamra chipi suj cuchi-si   huañuchi   'The boy killed
    boy   there one pig-not-witnessed killed   one pig there'

5. Huamra cuchi cayna-si   huañuchi   'The boy killed a
    boy   pig yesterday-not-witnessed killed   pig yesterday'

6. Cayna   iscay cuchi chipi-mi   huañuchi   'Yesterday he killed
    yesterday two   pig there-witnessed killed   two pigs there'

7. Huañuchi-si   'He killed it'
    killed-not-witnessed

B. Dubitative modification

The following examples from Tlingit - Alaska show how particles
may be used to express degrees of doubt or of certainty. Since these
particles can occur in any clause type, and at virtually any point in
the clause (i.e. following almost any phrase) they are best described
by a statement of modification. In the examples given, they are shown
modifying the transitive, intransitive, impersonal, stative, nominal
and locative clauses respectively.

1. xóots   shakdé saxwaa.áx   dzeeyáak 'Maybe I heard a
    brown-bear   voice-I-heard earlier-on brown bear earlier.on'

2. Juneau-dé kwashé kukgwaatèen   'Perhaps he's going to
                    he-will-take-a-trip   Juneau on a trip'

3. kínax kusi.áat'   xáa   'It's sure cold'
    really it-is-cold

4. tlax a yáanax   ee wdixwétl kwshé   'Maybe you're too tired'
         it face-beyond you is-tired

5. ee   xòonee kwshé   'Maybe it's your friend'
    your friend

6. aatlèin dáanaa xáa doo jèewoo   'He sure has lots of
    lots   money   his hand-loc.   money'

C. Negation modification

Negation is another category that can often be handled as a
modification of the types of the unit where it occurs. Most frequently
negation occurs at clause and/or phrase rank. In the Mbembe - Nigeria
data given below it will be seen that the clause structures are :

SUMMARY

In analysing clauses, different types are set up when there are
differences in basic structure i.e. in the elements and syntagmatic
features (order, status of elements etc.). Differences in clause
structure are analysed as modification of basic types when they occur
with a number of basic types. If they occur with only clause type,
it is generally preferable to set up an additional type.

5.11 DISTINCTION BETWEEN NUCLEUS AND PERIPHERY

In order to avoid repetition in describing structures which are
similar in certain parts, one can sometimes divide the structures
into nucleus and periphery. The peripheral part is the part which is
the same in all the structures, and the nucleus is the part which
differs. This division into nucleus and periphery also helps display
the relationships of the various elements to each other and to the
whole more clearly.

At clause rank it is often useful to divide structures into nucleus
and periphery (sometimes called 'margin'), the VP, NPs and NPo forming
the nucleus, as they are the part of the clause which contains the
differences on which clause types are based, and are often linked by
features of cross reference.

In the following data from Mambila – Nigeria, active clauses may
be divided : transitive (1-5), intransitive (6-9), ditransitive (10-13).

1. nòr búda leh gwulla nagup ahehne à tan   'That man sold his cow
   man that past sell   cow   his   at market in the market'

2. nòr leh gwulla nagup éh   mun   ahehne à le   lehre
   man past sell   cow   with child of-his at village yesterday

   'Yesterday the man sold the cow with her calf in town'

3. nòr leh kua nagup bò   à ten   chir kwar kwar 'The man drove the
   man past drive cow plu. at there road quickly   cows quickly down
                                                       the road'

4. nòr ba   gwulla bil ahehne hohm   'The man is selling his
   man cont.sell   goat of-his well   goat for a good price'

5. chia chéhn deh   nòr leh gwulla bil   éh mun   hohm seh
   day one   certain man past sold   goat with child good very

   'One day the man sold a goat with a kid very well'

6. nòr leh nda à tan   'The man went to the
   man past go to market   market'

7. ve   leh nda éh   soo   ahehne à tan menjoo   búnu 'The woman went
   woman   go with basket of-her   morning this with her basket
                                                         to the market
                                                         this morning'

8. ve   leh nda éh   bur ahehne à le ter ter 'The woman went with
   woman   go with dog of-her   slowly   her dog slowly to the
                                                   village'

At <u>word</u> rank it may be useful to describe a verb in terms of nucleus and periphery, if the differences on which the verb types are based occur in only one part of the verb word. For example in <u>Nasioi</u> - Papua New Guinea there are three types of verbs : transitive, intransitive and speech which occur with different subject person markers, but the same dual number marker, negative and tense marker occur with all types of verb. If the structure of each type were described in the normal way, this would result :

$$\text{verb type 1} - Vrt_1 + obj(dir/indir) + subj_1 \text{ (dual) (neg) (past)}$$

$$\text{verb type 2} - Vrt_2 + subj_2 \text{ (dual) (neg) (past)}$$

$$\text{verb type 3} - Vrt_3 + subj_3 \text{ (dual) (neg) (past)}$$

It is obvious that such a description of the verb types is very repetitious.

So now we will divide the verb into the nucleus and periphery. The nucleus will need to be described separately for each type because it contains the differences on which the type is based. So it must include the verb root, object and subject (the latter because of the different sets of subject suffixes).

So the revised description of the verb is Nasioi is as follows :

There are 3 types of verb : transitive, intransitive, speech. They are described in terms of nucleus and periphery.

The Nuclei

Type 1 transitive   : $+ Vrt_1 + obj + subj_1$

Type 2 intransitive   : $+ Vrt_2 + subj_2$

Type 3 speech   : $+ Vrt_3 + subj_3$

The Periphery

The (postnuclear) periphery is the same for each verb type :
(dual)   (neg)   (past tense)

CHAPTER 6

SENTENCE ANALYSIS

6.1 – SENTENCE STRUCTURE AND TYPES

The structure of the sentence is described in terms of the elements (clauses) and syntagmatic features. These include the order, status and relationship of the elements in the sentence and also any demarcative features. Various sentence types are set up using the criteria already described for setting up types of linguistic units. It is frequently advantageous to establish a limited number of basic sentence types and to make statements of modifications that can be applied to them (see section 6.4.

The primary division of sentences is usually into simple and complex.

A. Simple sentences : these consist of a single clause as the only element, often with a syntagmatic feature of intonation. There may also be other demarcative features, such as particles functioning as sentence introducers.

B. Complex sentences : these consist of two or more clauses as elements with various syntagmatic features showing the relationship between the clauses. Complex sentences are often further subdivided into coordinative and subordinative sentences. However, this division does not prove useful in every language.

i) Co-ordinative sentences : these consist of two or more clauses considered to be of equal status in the sentence. Such clauses usually have the same structure as they would have when occurring as separate simple sentences and are linked by some kind of conjunction.
Sometimes the relationship is marked by pitch features or by parallel tense changes in both clauses, showing them to be elements in a coordinate construction.

In English coordination is marked by conjunctions, as for examples :

He enjoys a game of tennis but his wife has always made swimming her chief summer relaxation.

At the sound of the explosion Dick ran to the window and Betty dashed upstairs to reassure the children.

ii) Subordinative sentences : these consist of two or more clauses, one of which is nuclear to the sentence, all other clauses in the sentence being in a subordinative relationship to this one. The nuclear (main) clause will usually have the same structure as it would have when occurring as a simple sentence, while the subordinate clauses will differ in for from their 'independent' form. Frequently the main grammatical signal of subordination is the occurrence of a different form of the verb in the VP of the subordinate clause.

4. wɛn   ótə̀   ekon   'The boy takes his gun.'
   boy   he-takes gun

5. ófî   epu   'He kills the monkey.'
   he-kills monkey

6. odɛm. ótə̀   epu   'The man takes the monkey.'
   man   he-takes monkey

7. yákò̀l   ɛtɔ   'They go to the house.'
   they-go house

8. wɛn   óbə̀lî   epu   'They boy cuts up the monkey.'
   boy   he-cuts-up monkey

9. odəm nə   ónòn   ɛtɛn   'The man will cook the meat.'
   man   fut. he-cook meat

10. odəm   ódə̀   wɛn   ɛdɔ   'The man calls the boy and then
    man he-calls boy and-then   the boy takes his gun.'

    wɛn   ótə̀   ekon
    boy   he-takes gun

11. odəm   ótə̀   epu   ɛdɔ   'The man takes the monkey and
    man he-takes monkey and-then   then they go to the house.'

    yákò̀l   ɛtɔ
    they-go house

12. wɛn   óbə̀lî   epu   ɛdɔ   'The boy cuts up the monkey and
    boy   he-cuts monkey and-then   then the man will cook the meat.'

    odəm   nə   ónòn   ɛtɛn
    man   fut. he-cook meat

13. odəm   óòkò̀l   likol   'When the man goes to the bush
    man when-he-goes bush   he sees a monkey.'

    óká   epu
    he-sees monkey

14. óòkə̀   epu   ódə̀   wɛn   'When he sees a monkey he calls
    when-he-sees monkey he-calls boy   a boy.'

15. wɛn óòtə̀   ekon ófî   'When the boy takes his gun he
    boy when-he-takes gun he-kills   kills the monkey.'

    epu
    monkey

16. yáàkò̀l   ɛtɔ   wɛn   'When they go to the house the
    when-they-go   house boy   boy cuts up the monkey.'

    óbə̀lî   epu
    he-cuts-up   monkey

From the above data it can be seen:
a) the co-ordinate relationship between clauses is marked by the conjunction
   <u>ɛdɔ</u>
b) the subordinate relationship is marked in the VP of the subordinate

The sequence of descriptive tense followed by future marks another type of temporal sentence with the meaning 'if/when'.

> ɔ   tani eki ɔ si du eseni   'if/when he goes to market he will buy fish'

b) Phonological features

Many languages have complex sentences consisting of a series of simple clauses which are juxtaposed (put next to each other) without any conjunction or other grammatical linkage. It is the phonological features (e.g. intonation, downdrift of pitch in a tone language, general speed) which link the clauses together. Clauses which are juxtaposed are frequently in a sequential relationship, but juxtaposition may also indicate other relationships (e.g. antithesis, apposition etc.).
Study the examples below.

Guayaboro (Colombia)

'I left the house, but, as there was a tiger on the trail, I didn't go, and so returned home.'
     would be expressed:
'I left the house / there was a tiger on the trail / I didn't go /
 I returned to the house'

Tlingit (Alaska)

Short clauses with a close semantic tie are frequently linked by being spanned by one gradual downdrift of pitch and ritardando (slowing down):

a wdigàan	/	tlax̱ aak'é k̲uk'é
it was-shining	/	very fine weather

'The sun was shining; it was certainly fine weather.'

6.3   COMMON SENTENCE TYPES

Just as we found that there are a number of clause types which are commonly found in languages, so there are certain sentence types which occur frequently.

Examples of the most frequent types will be found below. Note especially that although at sentence rank the labels of types tend to reflect semantic relationships, sentence types must be distinguished on grammatical grounds, i.e. the type of clauses which occur and the way the relationships between the clauses are marked grammatically by intonation patterns, selection of tense forms, use of particles etc.

Some labels which are commonly used for sentence types are given below together with the English conjunctions which indicate the relationships involved:

COORDINATIVE	and	Bill plays the piano and he's learning the flute.
ANTITHETICAL	but	Bill plays the piano but he wants to play the flute.
ALTERNATIVE	(either)...or (neither)...nor	Bill must have flute lessons or he'll be very unhappy.

3. umana-wahm oyahw kah
   friend-my   is   there
   'My friend is there.'

4. umana-wahm oyahw kah-o

   'Is my friend there?'

In the Bimoba data below, the simple statement sentence consists of a
clause plus falling intonation. In the case of polar questions, the modifi-
cation of this basic sentence type consists of the occurrence of the clitic
-a suffixed to the final word in the sentence and the substitution of a rising
intonation for the falling intonation. Content questions are marked by a
different modification : the substitution of a question word for the relevant
phrase and a level intonation in place of the falling intonation.

Illustrative data   Bimoba - Ghana

1. a   ŋaapoo daa   jeet daak   ni   'Your wife bought food in the
   your wife   bought food market in   market' (falling intonation)

2. a   bik   na   la   jeet le   'Where did your child see
   your child   the saw food where   food?' (level intonation)

3. a   daa   jeeta   'Did you buy food?'
   you   bought   food-?   (rising intonation)

4. n   bik   kɔi   ti   naab   'My child sold our cow.'
   my   child sold our   cow   (falling intonation)

5. a   sa   kɔi   be   daak   ni   'What will you sell in the
   you   will sell what market in   market?' (level intonation)

6. a   baa   kɔi na   naab daak   nia 'Did your father sell the cow
   your father sold the   cow   market in-?   in the market?' (rising
                                                  intonation)

B. Imperative modification: The most common modifications for the
imperative are:

   i) deletion of the NPs, or occurrence of pronoun only as NPs.
   ii) changes in the verb (or in the VP)

In the Mambila - Nigeria data given below, the modification for the
imperative consists of the deletion of the NPs and a change in the tone of
the verb, viz. verbs with tone 2 or 2 1 change to 1
                verbs with tone 3 or 3 4 change to 4

Note: tone 4 is the lowest tone

1. meh^4 hen^2 chik^4 'I see cloth'
   I   see   cloth

2. hen^1 chik^4 'See cloth!'
   see   cloth

3. meh^4 gwulla^3 chik^4 'I buy cloth'
   I   buy   cloth

4. gwulla^4 chik^4 'Buy cloth!'
   buy   cloth

5. meh   giun^{34} chik   'I want cloth'
   I   want   cloth

6. giun^4 chik^4 'Want cloth!'
   want   cloth

In some instances there is a high correlation between the classes of sentence and the types of sentence. For instance, all Imperative sentences may have similar structures (which may often be described conveniently as modifications of basic sentence types all of which function in the Statement class of sentences). On the other hand, other classes of sentence e.g. Initiating sentences, may have a variety of structures and cannot be so simply correlated with a particular sentence type or modificatory statement.

As with units at other ranks, the classes of sentences cannot usually be matched with the types of sentence on a one for one basis though there are frequently correlations and restrictions between the classes and the types.

CHAPTER 7

RANKSHIFTING

7.1 SECONDARY FUNCTION OF A UNIT

It has been seen that linguistic units normally function as elements of another unit at the next higher rank in the hierarchy. Such function is termed the primary function of the unit. In many instances, however, linguistic units also function as elements of other units at either a lower rank in the hierarchy or at the same rank. Such units are termed rankshifted. (Other terms sometimes used are 'embedded' or 'included' or 'downgraded').

Rankshifting involves a mismatch between form (or structure) and function of a unit. Either a unit of a particular structure does not function at the normal rank (e.g. a clause functions at phrase rank instead of at sentence rank) or, alternatively, a unit functioning at a place in a structure at a certain rank does not have a form that is associated with that place in the structure (e.g. one of the modifiers of an NP is a clause instead of a word).

At times it is difficult to recognise when a unit is rankshifted. No formal discovery procedures can be given. When you come across a stretch of data which you know to be a complete unit (like a clause or a phrase) functioning in an unusual place (i.e. at the 'wrong' rank) you can suspect it has been rankshifted from somewhere else in the hierarchy.

One of the units most frequently rankshifted is the clause. It may function either as an element of the phrase (i.e. as an element of a unit at a lower rank) or as an element of the clause (i.e. as an element of a unit at its own rank). The symbol for a rankshifted clause is rsCl.

7.2 RANKSHIFTED CLAUSE AS MODIFIER IN THE NP

In many languages relative clauses are one of the most common rank-shifted elements. A relative clause is one which is functioning as modifier in the NP. Compare for example, 'The naughty boy was punished' and 'The boy who bit his sister was punished'. It can be seen that the rsCl is function-ing in place of a word. In English the special characteristic of the relative clause is that the Object or Subject NP is replaced by a relative pronoun (who, which, that) which refers to the noun being modified. The remainder of the rsCl has the same structure as an independent clause - compare 'who bit his sister' and 'the boy bit his sister'.

When a unit is rankshifted there are frequently special markers, and there may also be restrictions on its structure. In the following data from Kon-komba - Ghana, the rsCl has two markers: n occurring following the NPs and na occurring in clause final position. In this data there is a restiction on the structure of the clause, viz. the NPs is always a pronoun.

In the Paumari – Brazil data below, the rsCl is functioning as object in the main clause and is marked by the normal object marker (see nos. 5,6, 8,10). There is no change in the structure of the rsCl.

1. 'ojoina
   I-return

2. 'i'omani
   you-lie-down

3. ihai-ra   'inofimania   'Do you want medicine?'
   medicine-obj. you-want?

4. sipatihi-ra   'inofimania   'Do you want bananas?'
   bananas-obj   you-want?

5. 'i'omani-ra   'inofimania   'Do you want to lie down?'
   you-lie-down-obj.   you-want?

6. 'ojoina-ra   'onofivini   'I want to return'
   I-return-obj.   I-want

7. sipatihi-ra   'ihaki   'You eat bananas'
   bananas-obj.   you-eat

8. sipatihi-ra   'ihaki-ra   'inofimania   'Do you want to eat bananas ?'
   bananas-obj   you-eat-obj.   you-want?

9. 'ogorana-ra   'onajahavini   'I clean my house'
   my-house-obj.   I-cause-to-make-clean

10. 'ogorana-ra   'onajahavini-ra   'I want to clean my house'
    my-house-obj.   I-cause-to-make-clean-obj.

    'onofivini
    I-want

In the following data from Kaiwa – Brazil it will be seen that the rsCl is identical in structure with the independent clause. This frequently happens with verbs of perception, e.g. see, hear, realise etc. Compare English:'I understand John is earning a lot of money' 'I see Mary has gone home already'.

Illustrative data from Kaiwa – Brazil

1. ahe∫a   kuña   4. ndoikwaai   Pedro
   I-see   a-woman   he-didn't-know Pedro

2. kuña   ogweraha   pira   5. mba'epa   ojehu
   a-woman is-carrying fish   what   happened?

3. ahe∫a kuña   ogweraha pira   6. ndoikwaai   mba'epa   ojehu
   I-see a-woman carrying fish   he-didn't-know   what   happened

When the rsCl is functioning as the Purpose Phrase (nos. 7-12) the head of the VP bears the suffix -hanwa.

Lalana Chinantec: ro? dʒun kjen ʃli? lii?n
                     horse good of boy good-looking
                     'The good-looking boy's horse'

But in Basari, a noun class language of Ghana, the rankshifted construction is marked by the transference of the prefix of the head of the phrase to become its suffix. Thus the rsNP itself does not bear any marker.

1. ubɔti	'chief'
2. uninja bɔtiu	'man's chief'
3. unimpu	'wife'
4. uninja nimpuu	'a man's wife'
5. unimpu ubɔ	'one wife'
6. uninja-nee nimpuu ubɔ	'this man's one wife'
7. kusaau	'farm'
8. kusaau kubɔ	'one farm'
9. uninja saaku	'a man's farm'

B. Prepositional Phrases

Compare the structure of the locative and nominal phrases in the following sentences:

She went to the big white house.

The big white house burnt down.

It will be seen that the structure of the NP and LP is the same apart from the initial preposition. So the most economical description of the LP is preposition followed by rsNP. In many languages adverbial phrases can be analysed in this way. Consider a further example from Mambila - Nigeria.

mɛl dua   'a big farm'   à mɛl-e dua   'at a big farm'
farm big

cir a   mɔ 'my path'   à cir-e mɔ a 'on my path'
path poss my

We see that the LP can be described as preposition followed by rsNP. When the NP is rankshifted, the head of the NP bears the suffix -e. In addition, the possessive marker occurs clause finally.

A construction such as the Mambila LP may be termed a relator-axis construction, the relator being the preposition and the axis being the rsNP. This is not a Head-Attributive construction as both elements are obligatory.

Another term, which is used for any construction with two obligatory items, is exocentric. Exocentric contrasts with endocentric which is used for a construction with only one obligatory element (i.e. if a construction at any rank is functionally equivalent to one of its component elements, it is endocentric, if not it is exocentric). All constructions are either exocentric or endocentric. For further explanation of these terms see Robins: General Linguistics pp 234-7.

CHAPTER 8

SUB-RANKS

So far, we have seen that all units at a given rank function as elements in the next rank above. But sometimes additional groupings are needed because of relationships between some (but not all) of the units at a given rank. For example, two or more verbs may function together as a group and the attributives in the VP relate to this group as a unit. In such a case it is useful to set up a sub-rank between the phrase and the clause for the VP only. The advantage of setting up a sub-rank is that only the unit concerned passes through it in ascending the hierarchy. If a full rank is set up, then all units have to pass through it, and this is clearly redundant in such circumstances.

8.1 SUB-RANK IN PHRASES - COMPOUND HEAD OF PHRASE

In some languages, a sub-rank needs to be set up between phrase and word rank. Such a word group will function as the compound head of the phrase.

The Engenni data below gives an example of a compound head of the VP. In nos. 1-6 it will be seen that the basic tone pattern is spread over both verbs in the compound head. In nos. 7-10 the completive suffix -ni occurs only with the second verb, but it modifies both verbs. Both these features illustrate that the two verbs are functioning as one unit.

1. (Simple) ō sísè   ákì   'She will put the pot down'
              she put-down pot

2. (Compound) ō shé sísè ákì   'She will take the pot off and
                                          put it down'

3. (Simple) ó   shírè   'She should run'

4. (Compound) ó   shírè tà   'She should run there'
                                          (lit: she should run go)

5. (Simple) ó   dīrē ésènì   'She cooks fish'
              she cook fish

6. (Compound) ó   dīrè dī ésènì   'She cooks and eats the fish'

7. (Simple) o   she-ni   aki   'She has taken the pot off'

8. (Compound) o she sise-ni aki   'She has taken the pot off and
                                            put it down'

9. (Simple) o dire-ni eseni   'She has cooked the fish'

10. (Compound) o dire di-ni eseni   'She has cooked and eaten the fish'

A sub-rank has also been set up in the NP in Engenni. Two nouns may function together as a compound head of the phrase. The relationship between the two nouns is marked by the feature of high tone on the second noun. The modifier modifies the whole compound head, and not just the immediately preceding noun.

Complex Clause (auxiliary verb underlined)

(a) Showing preverbal particle in either clause

1. kaani   wum   wu   <u>paali</u> / o   magi-u } 'The woman did not
   woman   the   not deliberate   she hit-him

2. kaani   wum   <u>paali</u> /   o   wu   magi-u } deliberately hit him'
   woman   the deliberate   she not hit-him

3. kaani   wum   daa   ta   wu   <u>joohri</u> / o   magi-u } 'The woman has not
   woman   the   again still not   return she hit-him

4. kaani   wum   <u>joohri</u> / o   daa   ta   wu   magi-u } yet hit him again'
   woman   the   return she again   still not hit-him

Similarly, the negative/tense marker, sentence connectors, and also the
NPo may occur in either clause.

(b) Showing negative/tense marker functioning in either clause

1. o   <u>pangi</u> / o   bi   veh   skuli } 'He doesn't even
   he   even   he   not   go   school

2. o   bi   <u>pangi</u> /   o   veh   skuli } go to school'
   he not   even   he   go   school

(c) Showing S.F. of sentence ma functioning in either clause

1. kaani   wum   ma   <u>siihni</u> /   o   magi-u } 'The woman actually
   woman   the   then   actually   she   hit-him

2. kaani   wum   <u>siihni</u> /   o   ma   magi-u } hit him'
   woman   the actually   she then hit-him

(d) Showing NPo in either clause

1. o   wú   <u>wani</u> pia /   o   sana } 'She will be able
   she   fut. able yams   she   cook

2. o   wú   <u>wani</u> /   o   sana   pia } to cook yams'
   she   fut. able   she   cook   yams

In the sentence below it will be seen how the complex clause forms a unit,
parallel to the other simple clauses, all of which function as elements of the
sentence.

o   na   yih   sono   tu   mu   o   twi   kaani   wum
he   when   reached   house   when   focus   he   insulted   woman   the

pa   o   paali   o   magi-u
so-that   she   deliberate   she   hit-him

'When he reached the house, he insulted the woman, so she hit him.'

8.3   SUB-RANK IN WORDS - STEMS

In describing the structure of each word class, it often proves necessary
to distinguish between the nuclear part of the word which has a variety of
internal structure (e.g. root, root + root + affix) and the affixes which
relate to the whole of the nucleus. Therefore the sub-rank 'stem' is intro-
duced between the word and morpheme ranks. The stem is defined as a nuclear
form consisting of one or more morphemes which may be further affixed.

A word or a stem produced by a <u>class-changing</u> affix is of a <u>different</u> functional class from the form from which it was derived, but it functions in the same way in the hierarchy as a word in its class which has simpler internal structure. For example, boy (simple noun root), departure (verb root + derivational affix), displeasure (derivational prefix + verb root + derivational suffix), realism (adjective root + derivational affix) all have different internal structures but the same possibility of external function.

Derivational affixes tend to occur in layered constructions, that is, to be applied to the stem in a specific operational order. For example, hospital, hospitalize and hospitalization but never hospitalation; fortune, fortunate, unfortunate, but never unfortune. Inflectional affixes, by contrast, cannot usually be considered as having a particular order of application; there tends to be greater independence and variation of co-occurrence. For example, in a Turkish form such as tʃali-ma-adʒak-lar (work-neg-fut-pl) 'they will not work' it is not possible to say that any one suffix is of a higher layer than any other, since any one may be removed or retained independently of the others.

<u>Examples of class-maintaining derivational affixes in English</u>

NOUNS	pig-let	boy-hood	pre-view	friend-ship
	prince-ling			
VERBS	re-form	pre-determine	de-compose	dis-approve
ADJECTIVES	in-tolerant	good-ly		

<u>Examples of class-changing derivational affixes in English</u>

(see C. Fries, STRUCTURE OF ENGLISH, pp. 113-116, 123-124, 126-130, 133-134)

1. Those which change verbs to nouns

arrive	arriv-al	deform	deform-ity
depart	depart-ure	break	break-age
deliver	deliver-y	defend	defen-ce (note loss of 'd')
accept	accept-ance	help	help-er
achieve	achieve-ment	decide	decis-ion (note stem change)
assist	assist-ant		

2. Those which change adjectives to nouns

big	big-ness	warm	warm-th
ideal	ideal-ism	equal	equal-ity (note change of stress)

3. Those which change nouns to verbs

friend	be-friend	glory	glori-fy
power	em-power	house	house (/ha^{u}s/ and /ha^{u}z/)

(and similarly proof, prove, etc.)

4. Those which change adjectives to verbs

bright	bright-en	equal	equal-ise
large	en-large		

13. pũ	'to write'	16. ŋwa jyiu	'I'm going!', 'I will go'
14. pũdwu	'pencil'		
15. pũswu	'writer'	17. ŋwa jyia	'I went'
		18. jyio	'Let's go!'

derivational		inflectional	
-d-	'instrument'	-a	'past'
-g-	'location'	-o	'hortative (suggestion)'
-s-	'person'	-u	'non-past'
-wu	'nominaliser'		

In conclusion, an analysis of the following data from Inga – Colombia will show how the description of the word structure is greatly simplified by setting up a sub-rank for stem.

Notes: -rca is past tense marker; there is no overt marker for 3rd person subject in the verb.

1. atahualpata   cahuarca
   hen (object)   he-saw
   'He saw the hen'

2. atahualpacunata huañuchirca
   hens (object)   he-killed
   'He killed the hens'

3. atahualpa   micuyta micucurca
   hen   food (0) was-eating
   'The hen was eating the food'

4. atahualpacuna   huañurca
   hens   died
   'The hens died'

5. runata   suma   huasita   cahuachirca
   man (0) beautiful house(0)   showed
   'He showed the man the beautiful house'

6. huasichicurca
   'He was house-building'

7. runacunata   ambirca
   men (0)   cured
   'He cured the men'

8. runacuna rupa ambiycunata upiarca
   men   hot medicines(0) drank
   'The men drank the hot medicines'

9. ambiy   rupayacurca
   medicine   was-heating
   'The medicine was heating'

In the description below, the following points should be noted:

  a) For each unit the function is described first, then the structure.
  b) In describing stems, the specific root class that may occur is given.
  c) Roots are classified according to the stems in which they function.
  d) Adj. roots do not have to pass through the stem sub-rank.

The Word

Three classes of word are set up on the basis of their function as elements of the phrase.

The Verb functions as the head of the VP

V ⟶ V stem   (Cont.) + Tense

CHAPTER 9

ALLOMORPHS

In the previous discussion on morphemes (chapter 2) it was assumed that a morpheme appears in the same form in every environment, but this is not necessarily the case, e.g. English plural suffix in cat-s, dog-s [-z], church-es, ox-en, etc. Although the form is different, the meaning is the same. In addition, the particular forms never occur with the same root, that is are mutually exclusive. These forms are termed allomorphs.

A morpheme may therefore be a single form or a group of allomorphs. To be assigned to a single morpheme, allomorphs must have the same meaning and occur in complementary distribution. The distribution of the allomorphs may be morphologically or phonologically conditioned.

9.1 MORPHOLOGICAL CONDITIONING OF ALLOMORPHS AND CLASSIFICATION OF STEMS

The data from Bariba - Republic of Benin illustrates allomorphs whose occurrence is determined (or conditioned) by the stems they occur with (i.e. their morphological environment). Hence such allomorphs are known as morphologically conditioned allomorphs. A special symbol indicates that allomorphs are morphologically conditioned: ∞. In this data certain nouns take the plural allomorph -ba, others take -bu and others take -su.

1.	akparaba	'bottle'	akparababa	'bottles'
2.	kurɔsɔ	'pig'	kurɔsɔsu	'pigs'
3.	swaa	'ear'	swaasu	'ears'
4.	kurɔ	'wife'	kurɔbu	'wives'
5.	gambo	'door'	gamboba	'doors'
6.	baro	'sick man'	barobu	'sick men'
7.	gambaru	'Hausa man'	gambarusu	'Hausa men'

As the allomorphs are morphologically conditioned, their distribution can be described only by listing the forms they occur with. While working on the analysis of the language, the analyst would keep record of which stems occurred with which allomorphs. The stems can thus be grouped into classes according to their occurrence with one allomorph or another. Ultimately, the class membership would be shown in the dictionary. For this Bariba data we can set up three classes: 1, 2 and 3 occurring with -su, -ba and -bu respectively. The dictionary entry for a noun would include an indication of which class it belonged to.

Description of the grammar would be as follows:

The Noun Stem

There are three classes of noun stems, set up on the basis of their function with the allomorphs of the plural suffix {-su}.

14. ruyubibe	'he looks for'	21. kareebe	'he is going out'
15. zuyubibe	'he will look for'	22. ribanibe	'he wakes up'
16. biyubibe	'he looked for'	23. zabanibe	'he will wake up'
17. kuyubibe	'he is looking for'	24. bibanibe	'he woke up'
18. rireebe	'he goes out'	25. kabanibe	'he is waking up'
19. zareebe	'he will go out'	26. kabanidu	'we are waking up'
20. bireebe	'he went out'		

When the basis for classifying stems involves more than one set of allomorphs, it is helpful to set up a chart to determine the class membership of the stems. The chart has the allomorphs across the top and the stems down the side, and the occurrence of each allomorph is marked.

	ku-	ka-	ru-	ri-	zu-	za-
-kaa-	✓		✓		✓	
-zooñe-	✓		✓		✓	
-dʒela-		✓		✓		✓
-yubi-	✓		✓		✓	
-ree-		✓		✓		✓
-bani-		✓		✓		✓

When the chart is examined, it is seen that the stems can be divided into two classes according to the combination of allomorphs they take. A full description of the verb stem and verb prefixes would be as follows:

The Verb Stem

There are two classes of verb stem set up on the basis of their function with the following prefixes, which have allomorphs: {ku-} 'present continuous', {ru-} 'present' and {zu-} 'future'.

Class 1 occurs with ku- 'pres. cont', ru- 'pres' and zu- 'fut'

    e.g. -kaa-   'write'
        -yubi-   'look for'

Class 2 occurs with ka- 'pres. cont', ri- 'pres' and za- 'fut'

    e.g. -bani-   'wake up'
        -ree-   'go out'

The Verb Prefixes

{ku-}   ku- ∞ ka-   'present continuous'
        ku- occurs with verb stem class 1
        ka- occurs with verb stem class 2

{ru-}   ru- ∞ ri-   'present'
        ru- occurs with verb stem class 1
        ri- occurs with verb stem class 2

{zu-}   zu- ∞ za-   'future'
        zu- occurs with verb stem class 1
        za- occurs with verb stem class 2

5. The general terms are chosen so that they only make distinctions where they are needed. Thus the term bilabial plosives is only used when there is a need to distinguish it from bilabial non-plosives.

Note:
Phonologically conditioned allomorphs should not be confused with allophones. With phonologically conditioned allomorphs, the variation occurs between full phonemes which contrast with each other and are not in complementary distribution. (For example English: illogical, impossible, indescribable, incomplete).

The following are the steps to take in identifying phonological conditioning.
1. Get data arranged properly: i.e. list each allomorph together with the items with which it occurs.
2. Assess the nature of the phonological difference between the allomorphs.
3. Examine items in each list to detect any likely cause of phonological differences between the allomorphs.
4. If similarities between items lead to plausible (likely) statements of conditioning, regard conditioning as phonological. If no such statements can be made, regard conditioning as morphological.

A further example of phonologically conditioned allomorphs is seen in the data from Turkish below.

			plural	'your' +sg.noun	'your' +pl.noun
1.	mum	'candle'	mumlar	mumun	mumlarɨn
2.	kibrit	'match'	kibritler	kibritin	kibritlerin
3.	yzym	'grape'	yzymler	yzymyn	yzymlerin
4.	sɨnɨf	'class'	sɨnɨflar	sɨnɨfɨn	sɨnɨflarɨn
5.	ders	'lesson'	dersler	dersin	derslerin
6.	satʃ	'hair'	satʃlar	satʃɨn	satʃlarɨn
7.	gøz	'eye'	gøzler	gøzyn	gøzlerin
8.	top	'gun'	toplar	topun	toplarɨn
9.	kuʃ	'bird'	kuʃlar	kuʃun	kuʃlarɨn
10.	diʃ	'tooth'	diʃler	diʃin	diʃlerin
11.	ok	'arrow'	oklar	okun	oklarɨn
12.	køk	'root'	køkler	køkyn	køklerin

{ -lar } -lar ∼ -ler   'plural'
-ler occurs following roots with front vowel
-lar occurs elsewhere

{ -un } -un ∼ -in ∼ -yn ∼ -ɨn   '2nd person singular'
-in occurs following a morpheme with front
        unrounded vowels
-yn occurs following a morpheme with front
        rounded vowels
-ɨn occurs following a morpheme with non-front
        unrounded vowels
-un occurs elsewhere

The Noun Suffix

{-z}   (-z ~ -ɩz ~ -s) ∞ -ən ∞ zero   'plural'

    (-z ~ -ɩz ~ -s) occurs with stem class 1 as follows:
      -ɩz occurs after sibilants
      -s occurs after voiceless non-sibilants
      -z occurs elsewhere

    -ən occurs with stem class 2

    zero occurs with stem class 3

Note: the reason that -z was chosen as the representative allomorph
was that together with its phonologically related allomorphs it
occurs with the greatest number of noun roots, and because within
the group of phonologically conditioned allomorphs it occurs in
the greatest number of different phonological environments.

9.5   ALLOMORPHS OF STEMS

In some languages there are allomorphs not only of affixes, but of stems
also. The data below from Isthmus Zapotec - Mexico illustrates allomorphs
of stems and affixes.

1. kuba	'corn dough'	ʃkubabe	'his corn dough'
2. luʔunaʔ	'bed'	hluʔunabe	'his bed'
3. neza	'road'	hnezabe	'his road'
4. manĩʔ	'horse'	hmanĩbe	'his horse'
5. daʔa	'mat'	ʃtaʔabe	'his mat'
6. geta	'tortilla'	ʃketabe	'his tortilla'
7. baʔduʔ	'child'	ʃpaʔdube	'his child'
		ʃpaʔdudu	'our child'

When stems have allomorphs, a number of stems frequently undergo similar
changes. Instead of describing the allomorphs of each stem individually,
which would be very lengthy, a general statement about the phonological
changes can be made which will cover a number of stems. The stem allomorphs
in this data can be described by two statements:

1. Stem-initial voiced plosive is voiceless after prefix ʃ-.

    e.g. geta   'tortilla'   ʃketabe   'his tortilla'
         baʔduʔ   'child'   ʃpaʔdube   'his child'

2. Stem-final glottal is lost before a suffix.

    e.g. luʔunaʔ   'bed'   hluʔunabe   'his bed'

         manĩʔ   'horse'   hmanĩbe   'his horse'

These two statements together with the statement of the allomorphs of
{h-} 'possessive',

    i.e.   {h-}   h- ~ ʃ-
                ʃ- occurs before plosives
                h- occurs elsewhere

cover all the morphemes having allomorphs.

1. ait^{h}iops	'Ethiopian'	ait^{h}iopos	'of an Ethiopian'
2. p^{h}leps	'vein'	p^{h}lebos	'of a vein'
3. p^{h}ulaks	'watchman'	p^{h}lulakos	'of a watchman'
4. aiks	'goat'	aigos	'of a goat'
5. t^{h}ε:s	'serf'	t^{h}ε:tos	'of a serf'
6. elpis	'hope'	elpidos	'of hope'
7. orni:s	'bird'	órni:thos	'of a bird'
8. giga:s	'giant'	gigantos	'of a giant'
9. hri:s	'nose'	hri:nos	'of a nose'
10. ark^{h}o:s	'ruler'	ark^{h}ontos	'of a ruler'

The phonological changes can be described by three statements:

· 1. Stem-final voiced non-alveolar plosive is voiceless before suffix -s

    e.g. aig-   aik-s   'goat'
         p^{h}leb-   p^{h}lep-s   'vein'

2. Stem-final single alveolar is lost before suffix -s

    e.g. elpid-   elpi-s   'hope'
         thε:t-   thε:-s   'serf'

3. A sequence of two stem-final alveolars is lost before before suffix -s, with compensatory lengthening of the preceding vowel.

    e.g. ark^{h}ont-   ark^{h}o:-s   'ruler'
         gigant-   giga:-s   'giant'

C. Metathesis

Two phonemes which may or may not be contiguous, change position,
e.g. -   taj + pa > tapja   ale + ra > arela

The following data from Zoque - Mexico illustrates the process of metathesis.

1. kenu   'he looked'

2. kenpa   'he looks, he will look'

3. kjenu   'he saw it'

4. kjenpa   'he sees it'

5. kjenhaju   'he saw it for him (on his behalf)'

6. kjenhapja   'he sees it for him (on his behalf)'

7. kento?ju   'he wanted to look'

8. kento?pja   'he wants to look'

When stem-final j is followed by p, metathesis takes place.

    e.g. kento?j-   kento?pja   'he wants to look'
         kjenhaj-   kjenhapja   'he sees it for him'

CHAPTER 10

WORD BOUNDARIES

10.1   THE WORD

Linguists have found that mother tongue speakers all over the world seem
to recognise intuitively two grammatical units – the word and the sentence.
While the number and nature of ranks in the grammatical hierarchy appear to
vary a little from language to language, all languages appear to have ranks
and units which correspond roughly to word and sentence.

In studying languages it is necessary to study both their phonological
and grammatical structures. It is useful to set up separate hierarchies to
assist us to understand and describe both the phonological and grammatical
structures, i.e. a grammatical hierarchy and a phonological hierarchy.
There are, in most languages, both many correlations between these hierarchies
and many differences. The grammatical ranks and units are not always co-
terminous with the phonological ranks and units. At the word rank, however,
there are often very clear correlations. While, therefore, we set up a word
rank and unit in the grammatical hierarchy, it is usually found that a simi-
lar rank and unit (often termed the phonological word) is needed in the
phonological hierarchy.

Besides the grammatical word and the phonological word there is the orth-
ographic word, i.e. the stretch of language it is conventional to write
between spaces. Where there is an alphabet already in existence, it is gener-
ally true that the orthographic word reflects the speaker's intuitions about
his language.

10.2   THE PROBLEM OF DECIDING WORD BOUNDARIES

Up to now word division has been taken for granted. The data has always
been presented with the word breaks put in. But raw phonetic data does not
come already divided up into words. We-hear-a-stream-of-uninterrupted-
speech-usually and not....one..word..after..another..each..neatly..divided..
from..the..previous..word!

Before grammatical units can be described in terms of their function and
structure, the boundaries of the unit have to be determined. We have already
seen that this can be a difficult matter at phrase rank (e.g. deciding whether
adverbial elements are part of the VP or separate phrases) and at morpheme
rank (e.g. deciding where to make morpheme cuts when there are allomorphs of
both stem and affix). There are often problems at word rank too in deciding
where the boundaries of words are.

10.3   EXAMPLES OF PROBLEMS IN WORD BOUNDARIES

Siane – Papua New Guinea has vowel elision when two verbs are used in a
close-knit phrase e.g. òtó + áiyè become òtáiyè ('he takes' + 'come' ='he
brings it'). It is interesting to find that the Siane people will always
write this as two words: òtó áiyè, but always find that difficult to read.
They will read òtáiyè easily, but then insist that it needs to be spelled
the long way.

3. Occurrence of affixation If a group of morphemes occur with the same affixes as a single morpheme, then it is probable that the group is one word, e.g. English: wheelbarrow, hitchhiker can be affixed with plural -s only at the end, though they consist of more than one morpheme. Apinaye: any noun or modifier can take the suffix -re 'diminutive'. mɨturia 'mood' (from mɨt 'sun' and wria 'side') can take it only finally, not medially, therefore is considered only one word.

4. Internal stability Within the word it is usual for the parts to occur in a fixed order. It is much less common for morphemes within a word to vary in order, than it is for words themselves to vary within the phrase or clause.

5. Non-interruptibility If a sequence of morphemes can be interrupted by a form which is already known to be a free word, then it is taken that that sequence is at least two words, e.g. Tlingit: yaandashán can be inter- rupted by the free word has 'third plural' yaa has nadashán 'they are grow- ing old' and therefore must be considered to have a word break (grammati- cally) between yaa and the remainer of the sequence.

6. Substitutability Most words have only one nucleus, and so only one morpheme that can be extensively substituted. If in a sequence of of other morphemes only one morpheme can be substituted by a large num- ber of other morphemes, the group is likely to be functioning as a sin- gle word, e.g. in the English word 'gladly' a large number of morphemes can be substituted for the first morpheme 'glad' but very few for the second 'ly'.

None of these criteria is sufficient on its own to determine word boundaries and sometimes these different criteria may conflict with each other so it is important to take them all into account when determining word boundaries.

10.5 APPLICATION OF GRAMMATICAL CRITERIA IN DECIDING WORD BOUNDARIES

Illustrative data from Kaiwa - Brazil

1. ɨwɨ'tuma	'The wind is already blowing' (lit. 'It's winding')
2. ɨwɨ'tupo'rã	'Lovely wind!'
3. ipo'rãɨwɨ'tu	'The wind is lovely'
4. ipɨ'tãha'gwe	'Its feathers are red'
5. ha'gwepɨ'tãpo'rã	'Its feathers are a beautiful red'
6. iho'vɨha'gwe	'Its feathers are green'
7. ha'gweho'vɨpo'rã	'Its feathers are a beautiful green'
8. ha'gwema	'It already has feathers' (lit. 'It's feathering')
9. ipo'rãha'gwe	'Its feathers are beautiful'

It can be seen that with the exception of the derivational affixes i- (which changes adjective roots into verbs), and -ma (which changes noun roots into verbs), all morphemes can occur in different places in the utterance, i.e. there is apparently no fixity of order, therefore these can be regarded as separate words. Phonological criteria coincide with grammatical. Stress occurs on the second or third syllable of each word. There is never any stress on i- or -ma, which supports the hypothesis that they are not words.

CHAPTER 11

ABOVE THE SENTENCE
===

11.1   RANKS ABOVE THE SENTENCE

The following are some of the ranks and units that are established above the sentence.

1. Discourse - often regarded as the largest verbal unit, functioning in an entirely non-verbal context. It may include one or more utterances (see below) united by some linking feature. Examples might be the conversation type discourse made up of initiating and response utterances or the monologue type,etc.

2. Utterance - this 'unit' may sometimes be defined by the change of speakers and by its distribution in the discourse. For example, the conversation type of discourse is composed of two or more utterances. There may be certain features as follows:

   a. Distinctive opening and closing markers.
   b. Dependent utterances may be less than complete clauses.
   c. There may be a characteristic use of pronouns.
   d. Questions and responses may be a particular type of dependent utterance.

Formal opening and closing markers of a narrative type of utterance might be 'I'm going to tell you about...', 'Once upon a time...' (a particular style of narrative). Closers might be 'That's all', 'They lived happily ever after'.

3. Narration - is sometimes described as a particular type of utterance which may or may not be formally marked.

4. Paragraph - the narration or utterance may perhaps be composed of one or more paragraphs. In Shipibo, the paragraph is marked by highly intricate ties between the person referent marker in succeeding sentences. Correct understanding of this feature is vital for translation.

In Kaiwa, the paragraph is introduced by a 'topic focus' marking usually a change of subject. The subject is then referred to implicitly or by pronouns within the paragraph. There are also grammatical features such as the 'reversed order' clause type which occurs as the last clause of the paragraph.

5. Sentence - the paragraph may be composed of one or more sentences. Sentences are sometimes defined as a 'grammatical unit of speech, potentially isolatable as a complete utterance of one speaker'. Features of pause, intonation, markers such as sentence introducers in the Mesquital Otomi may all be relevant to the definition in a particular language.

APPENDIX A

LINGUISTIC LABELS

Once classes and types of units have been set up at any rank they need to be given names or labels. The following is a list of labels commonly used in linguistics together with samples of English to which they might be applied. It must be stresses that in any language these terms should not be used unless the unit is shown to be different in function or structure from other units at the same rank, and each label must be defined afresh for each language.

MORPHEME RANK (see Nida, Morphology, pp.166-169 for further labels)

ASPECT (kind of action)

    Continuative - action which continues
    Inceptive - beginning of action
    Frequentive - frequent action
    Completive - action which is finished/completed
    Incompletive - action which is not completed

MODE/MOOD (see modifications of sentence and clause)

VOICE (relationship of participants to action)

    Active - the subject performs the action: He came.
    Passive - the subject is goal of the action: He was shot.
    Reflexive - the subject acts upon himself: He shot himself.
    Reciprocal - plural subjects act upon each other: They shot each other.
    Causative - the actor causes an action: He caused her to come.

PERSON

    First person - relating to speaker: I, we
    Second person - relating to hearer: you
    Third person - relating to someone spoken about: he, she, it, they
    First person inclusive - relating to speaker and hearer
    First person exclusive - relating to speaker and others, but not to
                                    hearer

GENDER

    Masculine
    Feminine
    Neuter

NUMBER

    Singular - one
    Dual - two
    Plural - more than one (or two, depending on whether language has dual)
    Collective - as a body; every
    Distributive - as individuals; each

(Direct) Object
Subject
Temporal - refers to time
Topic - the nominal phrase referred to
Verbal/Verb - has a verb as head

TYPES (based on head of phrase)

Adjectival - adjective head
Adverbial - adverb head
Locative - refers to location
Nominal - noun or noun-substitute head
Temporal - refers to time
Verbal - verb head

CLAUSE RANK

CLASSES OF CLAUSE often take the same labels as those of the sentence types in which they occur. See 'Sentence Rank'.

Di-transitive - 2 NPo, often NPio and NPo: John gave Mary a present.
Complex transitive - 2 NPo, usually NPo and NPcomp: She thought him
a dear.
Transitive - one NPo: She kissed him.
Semi-transitive - verb of motion and Locative in place of NPo: He
went home.
Intransitive - no NPo: He slept peacefully.
Stative - often description of state: John was happy.
Impersonal - no NPs or NPo: It was springtime.
Active - optional NPo; used where there is no distinction between
transitive and intransitive.
Attributive/Descriptive - may be verbal or non-verbal, with AdjP as
nucleus
Equative - usually 2 NP, a topic and a comment: John was Mary's
sweetheart.
Locative - may be verbal or non-verbal clause; if the latter, then
then LP as nucleus
Nominal - NP as nucleus
Eventive : The weather turned cold.

SENTENCE RANK

CLASSES OF SENTENCE

Declarative/Indicative - statement: He lived in a castle beside a
great forest.
Imperative - command: Find the silver slipper without delay.
Interrogative - question: Did he ever find it?
Response - answer: Yes, I think so.
Initiating sentences: Long ago, there lived a good and wise king.
Concluding sentences: And so they all lived happily ever after.

TYPES OF SENTENCE

See pages 65 - 66

APPENDIX B

ABBREVIATIONS AND ALPHABETIZING INSTRUCTIONS

Abbreviations (for use in formulas and charts)

Sometimes the longer forms of the abbreviations (or even the full forms) will be more suitable, if the context does not make the meaning of the short form clear.

Acc	Accompaniment	M/mkr	Marker (e.g. TM Tense Marker, Fut M Future Marker, etc.)
Adj	Adjective	m/masc	Masculine
Adv	Adverb	Mod	Modifier
Art	Article	N	Noun
Aux	Auxiliary	n/neut	Neuter
Ben	Benefactive	Neg	Negative
C	Consonant	N-er	Nominaliser
Caus	Causative	Num	Number, Numeral
Cl	Clause	O/Obj	Object
Coll	Collective	P	Phrase (e.g. NP Noun Phrase, (Adv P Adverbial Phrase etc.)
Cond	Conditional		
Conj	Conjunctive	p/pers	Person
Dem	Demonstrative	Perf	Perfective
Des	Descriptive	pl	Plural
Det	Determiner	Pn	Pronoun
ditr/ditrans	Ditransitive	Poss	Possessive
Emph	Emphatic	Post	Postposition
excl	Exclusive	Prep	Preposition
f/fem	Feminine	Pres	Present
Fut	Future Tense	Px	Prefix
Hon	Honorific	Qu	Qualifier
Impv	Imperative	Recip	Reciprocal
Ind	Indicative	Refl	Reflexive
Inc	Inceptive	rs	Rankshifted
incl	Inclusive	Rt	Root
Interrog/Q	Interrogative	S	Sentence
intr/intrans	Intransitive	S/Sbj	Subject
IO	Indirect Object	Seq	Sequential
L/Loc	Locative	sg/sing	Singular

APPENDIX C

TYPES OF PROCESS

To state phonological conditioning by means of general statements it is often convenient to describe the phonological process which is involved. The following are the most common types of process:

        Assimilation – Dissimilation
        Reduction – Addition
        Metathesis
        Replacement
        Reduplication

1. Assimilation and Dissimilation

    <u>Assimilation</u>: a phoneme becoming phonetically more similar to an influencing phoneme.

    <u>Dissimilation</u>: a phoneme becoming less similar to an influencing phoneme.

    (a) Factors involved

        (i) Progressive vs Regressive changes

        <u>Progressive</u>: a phoneme influencing a following phoneme.
          Assimilation – n + p > nt   Dissimilation – n + t > nk

        <u>Regressive</u>: a phoneme influencing a preceding phoneme.
          Assimilation – n + p > mp   Dissimilation – n + t > ŋt

        (ii) Contiguous vs non-contiguous phonemes

        <u>Contiguous</u>: phonemes next to each other.
          Assimilation – ne + ip > niip Dissimilation – ni + ip > nuip

        <u>Non-contiguous</u>: phonemes separated from each other.
          Assimilation – ne + pi > nipi Dissimilation – ni + pi > nipu
          (Dissimilation usually involves non-contiguous phonemes)

        (iii) Types of articulation

        Point of articulation: bilabial, alveolar, velar etc.
          ŋ + d > ŋg   f + ŋ > xŋ

        Manner of articulation: plosive, nasal, continuant, etc.
          ŋ + d > ŋn   x + m > ŋm

        Voiced, glottalised, etc.
          t + z > ts   n + f > nv

        (iv) Partial vs complete

        <u>Partial</u>: to either point or manner, producing similar phonemes.
          n + p > nm   f + k > fx

        <u>Complete</u>: to both point and manner, producing identical phonemes.
          n + p > nn   f + k > ff

        (Any dissimilation may be regarded as complete, though degrees of dissimilation may be indicated.)

2. Reduction and Addition

    (a) Consonants

Reduction of consonant clusters: when morphemes occur next to each other, one or the other, and sometimes both, may lose one or more of their contiguous consonant phonemes.

$$at\text{-} + kiko > akiko \quad but \quad at\text{-} + iki > atiko$$

Fusion: a combination of assimilation and loss in which evidence of the original combination is still preserved.

$$ot\int + su > otsu$$

Developed phonemes: in certain clusters of consonants there tend to develop other consonants, sometimes called 'transition' consonants. These are quite rare.

$$m + r > mbr \quad m + k > mpk \quad \eta + r > \eta gr \quad n + r > ndr$$
$$n + s > nds \quad \eta + t > \eta kt \quad z + r > zdr \quad l + r > ldr$$

    (b) Vowels

Loss of vowel phonemes: generally results from reduction of a cluster of vowels, some types of stress or position of vowel at the end of a word. Loss of vowels in unstressed syllables, like 'weakening' of vowels, is quite common.

$$soga:'ti + ko > soga:t'ko$$

Compensatory lengthening: when a consonant or vowel is lost, a contiguous vowel may be lengthened to compensate for the loss of the segmental unit.

$$ar + liru > a:liru \quad but \quad ar + bonu > arbonu$$

Differences in vowel length due to open or closed syllables: there is a tendancy for vowels in open syllables to be long, and those in closed syllables to be short.

$$u + ba:k > u:ba:k \quad but \quad u: + tris > utris$$

3. Metathesis

There is no change in the phonemes, just in the order of their occurrence. The phonemes which change position may or may not be contiguous.

$$taj + pa > tapja \qquad ale + ra > arela$$

4. Replacement

One phoneme completely replaces another

$$ma^u s > ma^i s \qquad \text{'mouse'}$$
$$si\eta > s\varepsilon\eta \qquad \text{'sing'}$$

5. It is also possible to make general statements about other phonological processes such as reduplication. Reduplication may be partial or complete.

Complete: the whole root or stem is repeated. This is generally treated as a repetitive compound.

    kobe   'penny'   kobe-kobe   'a penny each'

Partial: the repeated portion of part of the root or stem is called a 'reduplicative'. Such reduplicatives may occur preposed, interposed, or postposed.

    un∫e   'one side'   un∫en∫e   'only one side'